

JPRS-UEA-85-042

10 December 1985

USSR Report

ECONOMIC AFFAIRS



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ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

KAPUSTIN REPORTS ON ECONOMIC RESEARCH TRENDS

Tashkent EKONOMIKA I ZHIZN in Russian No 8, Aug 85 pp 11-15

[Report by Ye. I. Kapustin, director of the Economics Institute of the USSR Academy of Sciences and corresponding member of the USSR Academy of Sciences, at a meeting of the Commission of USSR and GDR Economists: "The Economic Mechanism: Basic Directions of Economic Research"; date and place not specified]

[Text] The vital requirements of our society's progressive socioeconomic development dictate the necessity of a more intensive use of accumulated economic potential. In the meantime, at all sectors of socialist production from a work place to intersectorial complexes there are still large reserves which are insufficiently used for intensifying production and raising its efficiency.

It must be said that quite a lot of measures directed at improving the economic mechanism were carried out. However, so far they have failed to fulfill all questions with regard to improving the national economy management system. The reason lies in their insufficiently comprehensive nature.

Therefore, no significant effect has been achieved thus far in improving the entire economic management system by conducting individual and often isolated measures, for example, in the field of planning indicators, cost accounting methods, functioning conditions of the finance-credit sphere and so forth. Thus, a correct idea in and of itself of using economy with regard to the wage fund for stimulating a collective in fulfilling a plan with the least number of workers can be effective only under conditions of stable fund formation norms. Nothing worthwhile can be expected from this good undertaking during planning "from the achieved level."

An urgent need has appeared for developing and consistently putting into effect the conception of comprehensive improvement of the management mechanism. Such fundamental conception was put forward by the 26th CPSU Congress and subsequent plenums of the CPSU Central Committee. Forming its basis in the planned management of the national economy is the principle of optimum combination of centralization with certain operational-economic independence of labor collectives. Strict adherence to long-term interests of the entire society, solution of strategic tasks with regard to improving developed socialism and simultaneous strengthening of the initiative of labor collectives is impossible without this.

Thus, a correctly understood strengthening of the centralized basis in management does not mean the belittling of independence and initiative of labor collectives. The question is about a need of a more precise differentiation of strategic management questions, regarding the determination and realization of most important parameters of scientific-technical and socioeconomic development of the country for a long perspective and current management questions.

Centralized planned management under contemporary conditions should, apparently, first and foremost determine the strategy of socioeconomic development, ensure systematic, proportionate and balanced development of a unified national economic complex and its component parts and define the scientific-technical, investment and structural policy in the national economy, which ensures the conversion of social production to a primarily intensive path of development. It must ensure the formation and realization of along with sectorial and territorial the intersectorial proportions of the national economic plan and special-purpose comprehensive nationwide programs as well as define the economic levers in planned management and in stimulation of cost accounting activity of basic production links.

As long as centralized planning organs, ministries and departments do not rid themselves of petty guardianship of associations and enterprises, they will be unable to concentrate attention on solving precisely these global, strategic questions.

On the other hand, development of economic-operational independence of enterprises and associations should be expressed in granting them much broader rights as well as in an increased degree of their responsibility. Experience proves that solution of questions related to current economic activity should be turned over to low-level management links. But for this purpose it is necessary to clarify the functions, the rights and the degree of responsibility of production associations, enterprises and organizations in the sphere of planning and management of production.

One of the paramount and difficult tasks of economic science today is scientifically substantiated determination of limits of this economic-operational independence and also of ways and methods for ensuring the direction of this independence and initiative toward solution of national tasks. This problem still requires considerable study and testing of many proposals in practice. However, it apparently can be already asserted now that the strengthening of economic-operational independence of enterprises and associations presumes expansion of their functions with regard to many most important directions.

This, first of all, is drawing up by labor collectives of sound and balanced with regard to all sections annual and five-year plans for socioeconomic development on the basis of centrally determined control figures as well as a limited number of indicators confirmed by directives on the basis of long-term scientifically substantiated economic norms.

In this case it is necessary that the formation of production and output delivery plans is conducted gradually in greater measure on the basis of a system of orders and economic agreements. Moreover, orders and agreements must be worked

out before a plan is drawn up, and after its confirmation the interested sides can finally clarify their conditions and thus coordinated them fully with control figures and material and technical supply. Thus, an economic agreement will be an important means of precise definition and increased validity of production and output realization plans.

In our opinion, it is advisable to check the possibility of using agreements in interrelations between enterprises and associations on the one hand and higher economic organs on the other hand. Such agreements could contribute to strict fulfillment not only by enterprises and associations of their commitments with regard to quantity, quality and delivery periods of production, but would also raise the responsibility of higher organs for providing them with physical, financial and manpower resources.

It is also important to develop contractual relations within enterprises. Organizing work of subdivisions of enterprises on the basis of a collective contract can, apparently, be the basic form of such relations. At the same time, in order to raise the effectiveness of intraorganizational agreements it will be necessary to define in them more clearly the mutual commitments of subdivisions of enterprises and of an enterprise as a whole so that primary labor collectives will know in advance the amounts of their economic incentive, material liability and other conditions in fulfilling a collective contract agreement.

An extremely important and debatable question is the broadening of economic independence of enterprises and associations in the field of financing capital investments within simple and particularly expanded reproduction and renovation of production equipment and its improvement as it applies to changing requirements of the national economy and demands of scientific-technical progress by using own and borrowed funds. Of particular significance in this case, evidently, is a scientifically substantiated determination of the limits of the so-called "self-financing" of an enterprise. Experience indicates that the existing amounts of the production development fund are obviously insufficient for this.

Particular significance in further improvement of the economic mechanism is, of course, being attached to improvement of the planning system. The extremely complex and still unsolved problem of combining five-year and annual plans for socioeconomic development requires further scientific development.

Although it has been pointed out more than once in instruction documents that a five-year plan must be the core of the planning system, the priority in practice has belonged to an annual plan up to now. This is an obvious shortsightedness. The economy cannot be conducted based on guidance provided by instant results alone without taking prospects of production development into account.

Of not unimportant significance is the development of questions with regard to ensuring in the long-term and five-year planning system of all-round coordination of in kind-material and value proportions as well as the development of basic principles of financial policy, price formation and other. Thus, for example, it is extremely necessary to form a five-year finance-credit plan, which reflects the movement of combined money turnover, as well as to substantially raise the role of the bank system in centralized management of enterprises.

Qualitative changes in the level of development of productive forces and tasks with regard to intensification of social production objectively require certain reorganization of the mechanism in management of scientific-technical progress, including its organizational structure, nationwide planning in the sphere of NIOKR [scientific research and experimental design work], introduction and dissemination of scientific and technical achievements in the national economy and integration of science and production.

Apparently, it is still worth thinking about further differentiation of functions of those organs which are now engaged in determination and realization of a unified scientific-technical policy and of establishing more precisely as to which one of them and to what extent is to bear the responsibility for development and readiness for introduction of future technologies and new types of equipment and materials and for the formation of and control over fulfillment of special-purpose comprehensive scientific-technical programs.

Considerable influence on the acceleration of scientific-technical progress can be exerted by integrated scientific-production associations, on which it will be expedient to place the responsibility for development and introduction of unified technological systems, which are based on utilization of new generation equipment and ensure a fundamental rise in labor productivity and a considerable reduction of power-intensiveness and material-intensiveness of output with simultaneous reduction of capital intensiveness of production. In the opinion of many scientists, such associations should include research, design and planning organizations, have a sufficiently strong production base in the form of several plants and subdivisions for introduction of new technological and economic systems and servicing them during the process of exploitation as well as a personnel training center and possess necessary rights and resources. They must be responsible for the development and introduction of technological systems, which in the final analysis ensure technical renovation of corresponding production facilities and their advancement to world level goals.

Economic literature has repeatedly noted the necessity of changing the system of development and introduction of new equipment, which would define the creation of unified technological processes and systems of machines as the main object of planning. It should also be noted that the indicator of the technical and economic level of production being developed, being readied for production and being produced must become a leading one in planning and appraising the activity of associations and enterprises. This system must be turned into a barrier for insufficiently effective developments.

Apparently, the principle of economic agreement should also be used more fully in management of scientific-technical progress. Such long-term agreements can ensure more fully the integration of science and practical experience and unify the activity of all participants in the process of developing production and introducing new equipment and technology on the basis of precise differentiation of their functions, determination of responsibility, sanctions and through final result their shared incentive.

Particular significance in improvement of the management mechanism is now being acquired by stepped up systematic utilization of commodity-money relationships.

This determines the necessity of real transition to full cost accounting, which would make it possible to implement the principle of providing labor collectives at various levels with incentive for high economic and social results and at the same time place full or partial material liability on them for the low level of these results.

The indicated problem is directly connected with further development of normative methods for distribution of incomes of enterprises and associations and requires the use of the entire system of economic levers, including withholding a part of a profit to budget according to unified stable norms when a progressive tax on additional profit is introduced; making payments more precise (in some cases in the direction of an increase) for the use of natural, physical, manpower and financial resources and effective sanctions for violation of their normal rate of movement; replenishment of cost accounting funds of associations (enterprises) by using the remaining part of a profit; strengthening of contractual and payment discipline based on the principle of full compensation for the damage caused; increasing responsibility of producers for the quality of production they supply; withdrawing the quality control service from subordination to management of an enterprise; and reorganization of the current system of amortization deductions for the purpose of strengthening its influence on the technical and economic level and the rates of fixed production capital replacement.

Improvement in the organization of credit and noncash money turnover requires securing real correspondence of credits and their sources and barring formation of working capital at the expense of payment credits. A deeply differentiated approach to extension of credit to enterprises which work well and poorly should be practiced on a broader scale, to switch insolvent enterprises to special credit extension conditions and adopt special effective measures aimed at normalization of their activity with adherence to the principle of inevitability of economic and disciplinary punishment of the guilty ones, up to organizational reorganization and even liquidation.

Taking into account the extraordinary importance of the system of prices, it is expedient to provide for its further improvement according to the following basic directions: gradual bringing of prices into greater conformity with the changed level of socially necessary expenditures of labor; reducing prices calculated per unit of the net effect; strengthening the interconnection of the system of prices and the national economic plan, in particular by taking into account more fully in levels and correlations of prices the progressive changes in the national economy; establishing prices for new equipment by taking into account the expenditures on its production and utilization efficiency so that in the final analysis it will be economically profitable both for the producer and the consumer; and strengthening price stimulation of rational utilization of natural, raw material, physical, fuel and energy and other production resources.

Raising the effectiveness of economic incentives in growth of labor productivity and production efficiency and its direction at final results requires establishing of a direct, stable, known in advance and understood by all workers normative dependence of the wage fund on the level or increase of production efficiency, which is an essential condition for ensuring a rapid growth of labor productivity compared with wages.

Wage fund formation (depending on specific conditions of one or another sector) can also be carried out in the form of replenishment from part of the net surplus profit of associations (enterprises) after making payments and formation of mandatory cost accounting funds, that is in the form of a surplus fund and according to norms in relation to the volume of net (realized) production after deducting from it payments for funds, interest for credit and other primary payments.

With such wage fund formation methods its amounts and all economic incentive are placed in much closer dependence on the work results of an association (enterprise), correlation of the rates of growth of labor productivity and wages, economic and efficient use of any kind of resource and satisfaction of consumers with its production. In any case the aforementioned wage fund formation methods must be checked in practice.

For the purpose of increasing the stimulating influence of distribution and utilization of the wage fund in achieving high individual and collective work results it is expedient to:

introduce an order of planned stage-by-stage increase of wages rates and rates of pay within the framework of periods, which are established in a centralized order, first of all, at those enterprises which have independently provided the necessary means for this purpose (for this purpose it is necessary to grant enterprises the right to introduce on their own for the entire collective the future increased wage rates and rates of pay, which are established by themselves, within the bounds of the wage fund);

give up the practice of frequent revisions of output norms. New norms must be introduced under two conditions: when new equipment and technology are introduced or when wage rates are raised simultaneously, which ensures the invariability of rates;

carry out further development and increase the effectiveness of the collective form of labor organization and stimulation by improving the formation of complex brigades, which along with workers also include ITR [engineering and technical personnel] and employees; and

bring intraorganizational computation to a brigade (and its individual elements to a work place) on the basis of expanding its functions in independent solution of practical production tasks.

The broad-scale experiment, which at the present time is being conducted in the USSR national economy, provides for checking some of the described considerations in economic practice.

In the course of the experiment a search is being conducted for optimum bounds for expanding the functions of the primary link and realistically increasing the economic-operational independence and responsibility of production associations and directing their initiative at priority realization of national interests.

At the same time, the experiment has also shown the necessity of further all-round research and verification in practice of many thus far debatable questions.

But it is already obvious now that a transition to new management methods makes it possible to develop more optimal solutions with regard to many aspects of planned management of the socialist economy with the task of ensuring full adequacy of the economic mechanism for the contemporary level and condition of productive forces and production relations of the socialist society.

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INVESTMENT, PRICES, BUDGET, AND FINANCE

NORMATIVE FUNCTION OF PLANNED PRICE FORMATION EXAMINED

Moscow EKONOMICHESKIYE NAUKI in Russian No 7, Jul 85 pp 12-18

[Article by I. Lipsits, candidate of economic sciences: "Improving by Economic Mechanism and Intensifying the Normative Nature of Planned Price Formation"]

[Text] The scientific interpretation of the problems of improving the economic mechanism of developed socialist society is taking on special significance in connection with the preparation of the edition of the CPSU Program, and the elaboration of the plans for the country's economic and social development in the 12th Five-Year Plan. At the April 1985 Plenum of the CPSU Central Committee it was noted: "Whatever question we consider, and from whatever direction we approach the economy, in the final analysis everything rests upon the need for major improvement of administration and the economic mechanism as a whole"¹.

Many elements in the economic mechanism for the forthcoming five-year plan and the more prolonged prospect are currently being created anew and are being checked in the course of the large-scale economic experiment. This work is being carried out with the full use of all the positive experience in organizing socialist management, which experience has already been accumulated in our country and in the fraternal countries of real socialism. One of the merits of this experience is planned price formation, the place and functions of which in the economic mechanism of developed socialism have recently become the object of a lively exchange of opinions on the pages of the press. In the course of the polemics, one has also detected attempts to put in doubt not only individual methodological resolutions being used in the practice of planned socialist price formation, but also the basic methodological principles of forming a price system and administering it². These attempts cannot be deemed to have any substantiation, inasmuch as the principles of planned price formation in the USSR evolve directly from the Marxist-Leninist theory of labor value, are inseparably linked with the economic mechanism in effect, are coordinated with the tasks of the socioeconomic policy of the CPSU, and have undergone their practical verification throughout the history of the activity of Soviet price-forming agencies. Apparently it would be more desirable to concentrate attention on the search for new forms of implementing the basic principles of planned price formation which have already developed, forms that are adequate to the specific present-day conditions of the development of the national economy, and that are most suitable for resolving

today's tasks of improving the administration mechanism, which tasks have been specified in the decisions of the party and the government.

When considering from these positions the tasks of the further improvement of price formation in the USSR, it is especially important to define which price function (or functions) being realized in the process of planned price formation must be considered to be the predominant one in the 12th Five-Year Plan and for the period until the year 2000. The practice of management indicates that the existing mechanism of administration does not yet completely guarantee the resolution of a very important task of increasing the effectiveness of production -- the creation at the enterprises and associations of a self-interestedness, sufficient from the positions of the national economy, in reducing the expenditures for production and the prices of the output being manufactured (services being rendered). The lack of such a self-interestedness was one of the reasons for the insufficiently high rates of reduction of the resource-intensity of the production of output in most of the branches of industry in the 9th and 10th five-year plans. Under the conditions of an increase in the expenditures for the extraction of many types of minerals, that could not fail to cause an increase in the production costs and the prices for the output of material production. Meanwhile the rise in the wholesale and purchase prices in the final analysis is leading to a reduction in the volume of national income and to the curtailment of the capabilities for expanded reproduction. It is also necessary to take into consideration the fact that this growth occurs under conditions when the retail prices remain stable. As a result there is a disruption of the justified proportions among the various types of prices.

For purposes of eliminating the negative tendencies in the dynamics of expenditures, and creating better conditions for reducing them, it would seem to be necessary to achieve a considerable intensification of the normative function of price³ and its effect upon the formation of the socially necessary expenditures of labor in the production of output (the rendering of services).

The normative element is also typical of the present-day methodology of price formation, inasmuch as the planning and accounting function of price presupposes its orientation not on the actual expenditures, but upon the planned average-branch expenditures, which reflect the progressive standards for the expenditures of all types of resources. Prices, consequently, establish a kind of level of expenditures for production which is socially normal for the particular period. Under these conditions there arises at the enterprises having higher levels of expenditures a self-interestedness in reducing the production costs for the purpose of obtaining the normative amount of profit. However, within the confines of the existing economic mechanism, the normative element of the planning and accounting function of price is being realized to an insufficient degree. The directedness on the reduction of expenditures, which directedness is typical of this function, is weakened as a result of the objective contradiction between the planning-accounting and incentive-creating functions of price. Something else that gives rise to difficulties is the insufficient methodological working out of the questions that are linked with the resolution of the task that was formulated in the CPSU Program, which presupposes that prices must, to a greater and greater degree, reflect the socially necessary expenditures of

labor, and must guarantee the compensation of the costs of production and circulation, and a certain profit for each normally operating enterprise. The complexity of resolving this task is linked primarily with the absence in economic science of sufficient clarity concerning what specifically should be considered to be the socially necessary expenditures for the production and sale of output under the conditions of the developed socialist society and the conversion of the economy to the path of chiefly intensive development. In our opinion, a very important factor in this regard is what production costs should be made the basis of prices, because "the computation of the size of the value (ONZT [socially necessary expenditures of labor]) and its modification cannot fail to rest upon the indicators of production costs, and production costs serve as the initial factor in price formation"⁴.

At the present time in the methodology of planned price formation in the USSR when defining the production costs that are used as the basis of price, one sees the realization of an approach that has been substantiated by Corresponding Member V. P. Dyachenko. He has remarked that "the orienting factor during price formation must be the average-branch (general national-economic or local, depending upon the nature of the formation of the socially necessary level of expenditures) production costs"⁵. At such time one does not include in the computation the expenditures of enterprises with the highest production costs that are influenced by special factors (for example, the incomplete assimilation of production capacities, or the inefficient assignment of the production program among the enterprises in the branch). One also excludes from consideration the expenditures of enterprises, the production costs for whose output is the lowest as a consequence of unrepeatably favorable natural conditions or the use of the latest technical and technological resolutions, if their broad introduction in the particular branch during the immediate the future is impossible by virtue of objective reasons.

The approach that has been described has been subjected to criticism in the economic press, and from diametrically opposed positions. On the one hand, the proponents of the so-called theory of SOFE [expansion unknown] propose making the basis of prices the "closing expenditures," that is, the expenditures at the least effective enterprises, the output of which is nevertheless necessary for the complete satisfaction of the amount of social needs that has been accepted in the plan. On the other hand, proposals have been made to orient the prices at the levels of production costs which are achieved by the enterprises with the most progressive technological schemes in production. An extended critical analysis of the concept of price formation based on "closing expenditures" was provided during recent years on the pages of the economic press⁶. As for the concept of price formation based on the "least expenditures," in effect that concept is just as voluntaristic and just as incapable of reflecting the real processes of price formation as the concept of "closing expenditures." This concept of price formation, practically speaking, makes impossible any normal cost-accountability activity for the overwhelming majority of enterprises, which will be forced for a prolonged period of time to take advantage of budgetary subsidies. Both the increase in the number of enterprises operating at a planned loss, and the expansion of the sphere of rent relations with the adoption of one or the other of these

two concepts cannot resolve, we are convinced, the problem of the intensification of the normative nature of price.

A point of view which would seem to be more fruitful is the one that was developed in the works of S. G. Strumilin and Sh. Ya. Turetskiy⁷, and in recent years, V. A. Medvedev⁸. They offer a dual approach to the understanding of socially necessary expenditures: as a single value expressing the socially normal expenditures for satisfying a definite social need, and a differentiated standard for the admissible expenditures of the individual enterprises for the production of a mass of output that satisfies that need. Practically speaking, this finds expression in a system in which two levels of prices are necessary: single prices for the consumers of the output, and differentiated (settlement) prices for the producers as is generally accepted at the present time, for example, in the coal industry). This approach deserves special consideration, which would extend beyond the confines of the capabilities of this article. We might note only that it gives rise to a number of problems that are linked with the cost-accountability organization of production and is practically possible only on the basis of substantial changes in the existing economic mechanism. But within the confines of the latter it is necessary to recognize as most rightful the decision that is based on the unity of the price for producers and for consumers. It is another question that the determination of the price base only on the basis of the averaging of the levels of the expenditures among the various enterprises that produce the bulk of the output and that are operating under the conditions that are socially normal for the particular period is already becoming insufficient. The price-formation agencies have to rest not so much upon the socially necessary expenditures of labor, as they do upon the planned-necessary expenditures of labor, that is, the expenditures that are required for the fulfillment of the production program that has been specified in the plan. But the question of the degree of efficiency of that production plan itself and its corresponding capital-investments policy from the point of view of dynamics of the socially necessary expenditures of labor which dynamics are preferable for society is, as it were, posed in parentheses.

Let us take, say, the example linked with the development of ferrous metallurgy in the USSR. More than half the steel (56-57 percent) in the USSR is still being smelted by the open-hearth method, and in 1960-1983 the absolute volumes of that smelting increased by a factor of 1.6; meanwhile the converted expenditures for the production of one ton of open-hearth steel are 2.07 rubles higher than with the oxygen-converter method⁹. Meanwhile in certain foreign countries during the same years there was a sharp reduction in the share of the obsolete and expensive open-hearth technological processes: during the years 1965-1978 the share of the steel that was smelted by that method dropped in the United States from 72 to 16 percent; in West Germany, from 43 to 13 percent; and in Japan, from 25 to one percent¹⁰. Thus it turns out that USSR Minchermet [Ministry of Ferrous Metallurgy] over the recent decades has carried out an unsubstantiated technical policy for the development of the branch, failing to show the proper attention to the accelerated transition to the most progressive technological schemes for the production of steel. Is it proper under these conditions to consider the average-branch expenditures that are developing at the present time in ferrous

metallurgy to be the socially necessary ones and to view them as the objective basis of the price of steel?

The complexities in the resolution of these problems, in our opinion, are largely linked with the fact that there has been insufficient study of the question of the role and place of commodity-monetary relations in the economy of developed socialist society and correspondingly the correlation of the functions of the plan, prices, and cost accountability in this mechanism. The basically correct principle concerning the leading role of planning in the administration of the national economy, in practice, unfortunately, has led to a certain absolutization even not so much of the significance of the plan itself, as the existing methodology for its elaboration, which is based on a system of balance sheets. The balancing, and primarily material-substantive balancing, is sometimes viewed as the most accurate method for recognizing and satisfying social needs.

And yet the widely understood social needs always presuppose an interest not only to what is produced and how, but also at what price, that is, the expenditures of available resources by which those needs can be satisfied. Unfortunately, in the existing economic mechanism, the principle that has been substantiated by the classic authors of Marxism-Leninism -- the principle of the necessity to weigh the expenditures and the beneficial effect as early as the stage of planning¹¹ -- has not yet received its proper practical realization, and this has been objectively leading to the weakening of the normative nature of price.

The question of the specific interrelationships between the plan and price from the point of view of the optimal organization of national-economic planning requires further elaboration, inasmuch as the recognition of the regulating role of the plan does not mean any lowering of the importance of price, which must execute a regulating function during the formation of the proportion in the plan itself.

The posing of the question about that role of prices, naturally, does not mean that the law of value must be viewed as a regulator of the economic processes, which is equivalent to the law of the planned development of the national economy. The determining importance of the latter with respect to the former under the conditions of socialism is one of the indisputable principles. But this does not hinder the conclusion to the effect that "in the developed socialist society, to which the intensive type of socialist expanded reproduction is adequate and where there has been an increase in the dynamism of the economic processes, there is an intensification of the role of the economic laws that regulate the expenditures of time for production and for the consumption of blessings and services. These are the laws of the steady increase in labor productivity, the economizing of time, and the law of value"¹². A statement such as this means that the action of the law of value must, obvious, be taken into consideration now in planning to a greater degree than during the preceding period. When making planning decisions, in all instances the most efficient version must be chosen with a consideration of the extent to which its consequences are acceptable from the positions of the price policy being carried out.

The increase in the role of the law of the economizing of time and the law of value at the stage of developed socialist society, in our opinion, also means the necessity of improving the methodology of price formation in the direction of the more complete reflection in the prices of the national economy's economic interests, which in all instances must predominate over the cost-accountability interests of the collectives at the individual enterprises and associations.

The development of the normative aspect of the interrelationship of prices and cost accountability takes on special importance in connection with the course that the party is carrying out to expand the independence and responsibility of the associations and enterprises, and the kolkhozes and sovkhozes. This expansion means an increase in the ranges of the economic decisions that the enterprises and associations will be able to make without any coordination with superior agencies in the process of fulfillment of the five-year and annual plans. However, in order to assure that these decisions in all instances proceed from the primacy of the national economy's economic interests, it is necessary to give the associations (enterprises) the corresponding economic orientation markers, and it is here that prices have been called upon to play one of the most important roles.

The resolution of this task will require in the long-term view the intensification of the role of prices as a generalizing standard of effectiveness, which standard plays a dual role in the planning of the national economy. It would be desirable at such time to devote special attention to the analysis of the structures and correlations of prices as early as the preplanning phase, in order to choose the directions in which it is possible to the greatest extent to promote a decrease in the production costs and the raising of the level of profitability in the branches of the national economy.

After elaborating the plan it will be necessary to carry out the analysis of the possible influence that its fulfillment will have upon the development of the price system, having in mind the fact that a real increase in the effectiveness of the national economy will be guaranteed by the plan only in the event that it contributes to the creation of conditions for a relative reduction in the prices of various types of output and services.

The intensification of the role of prices as a generalizing, balance-sheet standard of effectiveness that expresses in a synthetic form all the expenditures of social labor for the production of output presupposes an increase in the scientific substantiation of planned price-formation. In this process, obviously, it would be desirable in a more consistent manner to aim the realization of the incentive function of price not at the enterprise, but, rather, at the product, that is, one should proceed from the assumption that the task of regulating the conditions of the cost-accountability activity as a whole for the enterprises, associations, and ministries is not the chief function of price-formation and must be resolved basically with the aid of financial, credit, and other instruments. Prices are called upon the plan, in the resolution of such tasks, only an auxiliary role. The enterprise can have a normative level of profitability only in the event that the enterprise is

completely fulfilling its pledges with regard to shipments and is producing all types of output with expenditures that do not exceed the planned ones.

It is especially important to intensify the orientation of price-formation not at the normative levels of expenditures that have actually developed and that reflect the conditions of social production during the previous period, but, rather, at the normative levels of expenditures for the reproduction of the corresponding types of output during the effective period of the newly introduced prices, for which purpose one should use, when substantiating the new price lists, the information concerning the long-range planned production costs in the forthcoming five-year plan. The basic prerequisite for resolving this task is the substantial expansion of the sphere of application and the increase in the scientific substantiation of the planning of production costs, including the changeover to its five-year planning by types of output and most important products. That correspondingly requires a rise to a qualitatively higher level of the normative base of planning and its complete expansion.

The increase in the substantiation of the values expressing production costs as the basis of the price during the long-term period can be guaranteed by the gradual transition to the orientation of price-formation toward the socially necessary production costs, that is, the production costs that are computed on the basis of progressive technical-economic standards that have been established within the confines of their single national-economic system for those enterprises that have the socially normal conditions of production and that produce the bulk of the output that is necessary for satisfying a social need.

A foundation for resolving this task can be provided by the fulfillment of the USSR Gosplan decree entitled "System of Progressive Technical-Economic Norms and Standards, and Ways to Introduce It Into Planning." This system of standards in the long-term period must be supplemented by a methodology for selecting the enterprises whose production conditions can be deemed to be socially normal and, consequently, ones which should be taken into consideration when computing the average-branch normative production costs, which serve as the basis of the price. In our opinion, the only enterprise that can be deemed to be a normally operating one is an enterprise that has production conditions (technical and natural) that are socially normal for the particular planning period and that has achieved a level of use of production resources and qualitative characteristics of output that have been stipulated by the "System of Norms and Standards."

It would also be desirable to introduce assignments for changing the price levels into makeup of the indicators for the five-year plans for the development of the national economy. This step will provide the opportunity, on the one hand, to intensify the target nature of the planning of production costs, and, on the other hand, to convert the price realistically into an instrument for weighing the beneficial effect and the expenditures to obtain it when choosing the most efficient directions in the development of the national economy in the medium-term prospect. Long-term planning of prices creates the necessary conditions for realizing the normative function of prices while resolving two additional very important types of economic tasks: the evaluation of the economic effectiveness of long-term economic measures

and the elaboration of long-range financial plans and balance sheets with a consideration of the possible change in prices. That will make it possible to increase the realistic nature of the planning assignments and to achieve a more balanced situation with regard to the material-substantive and financial-value proportions of the plan.

In addition, in order to increase the substantiation of the values representing the production costs that are accepted for computing the price, it will be necessary to take more complete consideration in price-formation of the extent and nature of the social needs for various types of output. For this purpose it will be necessary to determine the amounts of needs that are objective for the particular planning period (minus the above-normative losses and reserves that artificially overstate the real size of the social need. Then it will be necessary to select for computing the socially necessary production costs the enterprises which, to a decisive degree, satisfy that need. The production conditions at those enterprises, then, will be the regulating ones for the particular stage in the development of the economy.

For a more complete and more substantiated realization of the normative function of price, we find that it is also necessary:

- to take all steps to expand the circle of output, the prices of which are established on the basis of the normative-parameter methods;

- to orient the prices toward the socially necessary level of the quality of output (services, thus putting up a road block to the use of resources for producing both relatively ineffective output, and output the high quality of which cannot be completely realized in consumption at the present-day level of development of social production and that therefore will not produce for society a return that is greater than the expenditures for the achievement of that quality;

- to make the degree of development of the system of collective incentives for the workers directly dependent upon the achieved level of effectiveness of production to the degree in which that finds expression in the level of profitability of the basic production activity of the collectives of enterprises and associations.

The last-mentioned requirement advances definite conditions when reconsidering the prices. The profitability levels that are accepted as the normative ones for elaborating new price lists must not be determined in the cross-section of the branches, proceeding primarily from the assumption that each of them must be given the opportunity to form economic-incentive funds in the amounts to be determined by the requirements of cost accountability. The point of departure here must be the overall mass of net income that realistically is to be created by the particular branch in the national economy (for example, by industry), and the proportions that are optimal from national-economic positions for distributing it [the overall mass] among the subbranches that are part of the particular branch.

Practical life attests to the fact that, when increasing, during the reconsideration of prices (rates) for the output in a particular branch of the

national economy, the mass of profit (and correspondingly the level of profitability with respect to assets) in excess of the level that has actually formed, we thus inevitably reduce the income of the other branches of the national economy or increase the size of the subsidies from the state budget that are channeled into the compensation of those increases in price. Meanwhile the present-day conditions for the development of the USSR national economy are such that we cannot speak of even a single one of the branches of the national economy as possessing an excessively high level of profitability, which level is capable of becoming a source of the redistribution of profit to the other branches. Consequently, an increase in the profitability of a particular branch in excess of the level that has actually been achieved by it at the expense of a corresponding rise in the prices for its output (services) necessitates the increase in the prices for the output of the other branches of the national economy and this, as has already been pointed out, is an extremely negative phenomenon, inasmuch as a further increase in the prices (rates) of output and services in the material-production branches can lead, in the long-term period, to a reduction either of the rates of economic development, or a lowering of the workers' standard of living, that is, to completely unacceptable consequences.

Hence it evolves that, during the long-term period, when carrying out the re-examinations of prices on the scale of the major branches of the national economy, the levels of profitability for the individual subbranches must not be taken as the initial limitations, obtaining an overall amount of the price increases for the branch (for example, for industry as a whole) as the final result. The question of the extents of the changes of prices by individual subbranches and the profitability with the new prices must be resolved by means of the redistribution of the overall mass of net income that is created by the particular branch of the national economy, that is, with an invariable average level of profitability (with respect to assets) of the particular branch of the national economy.

In order to choose the alternative which would be most efficient primarily from the national-economic positions, rather than from positions of cost accountability in the particular branch (subbranch), it is necessary to make broader use, when preparing the re-examinations of prices, of the interbranch balance sheet and optimization methods. This approach provides the opportunity to carry out the mathematical formalization of those tasks of price policy which have been planned by decisions of the CPSU and the Soviet government for the period being considered.

In our opinion, for the more consistent orientation of price-formation at the global national-economic interests, it is proper to view the sizes of the cost-accountability assets (especially the material-incentive funds) as a resultative-residual value that depends upon the actually achieved level of profitability of production and deductions from profit, which guarantee the normal carrying out of the processes of expanded socialist reproduction on the whole for the national economy. Cost accountability under socialism is objectively necessary. In addition, the specific forms of its realization and the degree of development on the whole for industry and in each individual branch must be predetermined by the achieved level of effectiveness of production and by the degree of influence that the changes of the prices for

the output in each branch have upon the national-economic value proportions, and upon the resolution of the tasks of the socioeconomic policy of the CPSU.

The improvement of the methods of computing all the elements of price and the effectiveness of output with the purpose of the more accurate determination of the basis of the price -- the socially necessary expenditures of labor -- and the intensification on that basis of its normative nature does not mean that during the long-term period the prices in all instances will have to correspond to those expenditures to the maximum extent. The desirability of the deviation of prices from value will also be preserved in the future. Analyzing the various alternatives of the price policy, Academician S. G. Strumilin wrote, "...in the countries of socialism, the optimal policy would be to strive for the lowest prices and the highest payment of labor, which are especially favored by the prices based on value with the possibly stable monetary currency"¹³. That principle continues to be valid at the present time, and therefore the normative nature of the planned prices in the national economy of the USSR will be realized to the fullest extent when those prices develop in the direction of the relative reduction of prices for new types of output, the stability and reduction with respect to the most important types of raw materials, the output intended for technical-production purposes, and consumer goods.

FOOTNOTES

1. "Materialy Plenuma Tsentralnogo Komiteta KPSS 23 aprelya 1985 goda" [Materials of the Plenum of the CPSU Central Committee, 23 April 1985], Moscow, 1985, p 11.
2. For a critical analysis of the concepts that are being advanced at the present time for improving price-formation in the USSR, see: Glushkov, N., "Planned Price-Formation (Questions of Theory and Practice)," VOPROSY EKONOMIKI, No 1, and "Planned Price-Formation: Improvement Methods," KOMMUNIST, No 3, 1985.
3. What becomes more and more obvious is: at the new stage of economic construction, during the period of the turning of the national economy onto the path of intensive development, what begins to move into the foreground is a new function of the planned price -- the normative function. In conformity with the decrees pertaining to the economic mechanism, the prices must become a stable social standard for the expenditures for the production of output" (Glushkov, N. T., "Price-Formation and the Economic Mechanism," EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA, No 9, 1982, p 7).
4. Dyachenko, V. P., "System of Price-Forming Factors and the Scientific Foundations of their Classification," in the collection "Obshchestvenno neobkhimyye zatraty truda, sebestoimost i rentabelnost" [Socially Necessary Expenditures of Labor, Production Costs, and Profitability], under the editorship of V. P. Dyachenko, Moscow, 1963, p 28.
5. Ibid., pp 29-30.

6. See: Kozlov, G., "Peculiarities of the Action and Use of the Law of Value Under Socialism," *PLANOVOYE KHOZYAYSTVO*, No 3, 1983; Glushkov, N., "Planned Price-Formation: Improvement Methods," *KOMMUNIST*, No 3, 1985.
7. See: Strumilin, S. G., "Theory of Price-Formation Under the Conditions of Socialism," in the collection "50 let planovogo tsenoobrazovaniya v SSSR" [50 Years of Planned Price-Formation in the USSR], Moscow, 1968, pp 15-16; Turetskiy, Sh. Ya., "New Wholesale Prices and Problems of Price-Formation," in the collection "Khozyaystvennaya reforma i tsenoobrazovaniye" [Economic Reform and Price-Formation], Moscow, 1968, pp 11-12.
8. See: Medvedev, V. A., "Upravleniye sotsialisticheskim proizvodstvom: problemy teorii i praktiki" [Administration of Socialist Production: Problems of Theory and Practice], Moscow, 1983, pp 124, 125, 252-254.
9. See: Ivantsova, N., "Scientific-Technical Progress in Ferrous Metallurgy," *VOPROSY EKONOMIKI*, No 2, 1985, p 50.
10. See: Nochevkina, L. P., "Intensification in the Capitalist Countries: Achievements and Contradictions," *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA*, No 10, 1980, p 154.
11. Thus, F. Engels, speaking about planning under socialism, remarked that "this plan will be determined in the final analysis by weighing and comparing the beneficial effects of the various objects of consumption with one another and with the quantities of labor that are necessary for producing them" (Marks [Marx], K., Engels, F., "Soch." [Works], 2nd ed., Vol 20, p 321.
12. "Sistema upravleniya ekonomikoy razvitogo sotsializma: tendentsii i problemy" [System of Administering the Economy of Developed Socialism: Tendencies and Problems], under the editorship of P. G. Bunich, Moscow, 1982, p 48.
13. Strumilin, S. K., "Theory of Price-Formation Under the Conditions of Socialism," in the collection "50 let planovogo tsenoobrazovaniya v SSSR," Moscow, 1968, p 12.

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CSO: 1820/242

INVESTMENT, PRICES, BUDGET, AND FINANCE

RESTRUCTURING OF FINANCIAL RELATIONS IN SOVIET ECONOMY URGED

Moscow FINANSY SSSR in Russian No 8, Aug 85 pp 34-37

[Article by P. A. Petrov under rubric "Discussion of Financial Problems":
"Certain Questions of Improving Financial and Settlement Relations"]

[Text] The Country of Soviets has entered the final year of the 11th Five-Year Plan. Every Soviet citizen is preparing to meet in a worthy manner the 27th CPSU Congress, which will set new goals for improving the society of developed socialism. The foundation of carrying out social and political tasks, as is well known, is the economy. V. I. Lenin said that "in our society economic matters are our common cause. This is the most interesting policy for us" (Lenin, V. I., "PSS" [Complete Collected Works], Vol 43, p 330). That is why the efforts of the party and the nation are directed first of all toward the taking of all steps to intensify the economy on the basis of the acceleration of scientific-technical progress and the complete improvement of the forms and methods of socialist management.

A specific work program in this area has been planned by the 26th CPSU Congress, and by the subsequent Plenums of the CPSU Central Committee. Emphasis has been made of the need to improve persistently the economic mechanism and the entire system of administration. The crux of the matter, as was pointed out at the April 1985 Plenum of the CPSU Central Committee, is the improvement of the entire system of social relations, and primarily the economic ones. That means the steady carrying out of the planned development of the economy, the reinforcement of socialist ownership, the expansion of the rights, the increasing of the independence and responsibility of enterprises, and the intensification of their self-interestedness in the final results of the work.

The decisions of the 26th CPSU Congress and the subsequent Plenums of the CPSU Central Committee emphasized the need to increase the effectiveness of the entire complex of economic levers and incentives, including price formation and the credit and financial system. In this regard it must be noted that certain economists, especially those working in the branches of the national economy, have got an incorrect idea of the concept of "economic incentive" as being only a measures of encouragement. But an incentive is a compulsion to take action, and it can be applied not only in the form of encouragement, but also as an economic sanction. In such instances the economic incentive as a

definite sanction, is more time-responsive for application, whereas the economic incentive in the form of an encouragement is more conservative. This is explained by the fact that, in the practical situation, a reduction in the economic incentive funds as against the achieved base indicators, as a rule, is not carried out even when there is a reduction in the growth rates of the fund-forming indicators.

As a result of the application of only the encouragement incentives, the labor collective, having created a definite level of incentive funds, can subsequently "clip the coupons" in exchange for the improvement of the production indicators in the past, without being concerned about improving them in the future. For the success of the job at hand, it is necessary, in our opinion, to achieve the intelligent combination of the encouragement measures and the economic sanctions. This must pertain both to the enterprise as a whole and to the individual workers.

The improvement of the economic mechanism and of economic relations requires the carrying out of measures to reorganize the financial relations in the national economy on the basis of the present-day requirements and the prospects for the development of the socialist economy. It seems to us that, in the light of these requirements, it would be desirable to consider critically a number of the principles contained in the system that has developed as the present time in the financial and settlement relations of enterprises and economic organizations with the financial system and other economic agencies. This is all the more necessary inasmuch as, in conformity with the positions taken by the CPSU Central Committee, there must be a consistent carrying out of the line aimed at the complete improvement of the system of administering the national economy, the improvement of its organizational structure, and the reduction of the size of, and the costs of operating, the administrative apparatus at all levels. Steps are being carried to achieve the considerable simplification of the administrative apparatus and to increase its economic operation and effectiveness. The central economic departments must be given the responsibility of sharply reducing the paper flow between the enterprises and the superior agencies in the form of various kinds of planning computations and report indicators.

The need to improve the financial and settlement relations in the national economy is also caused by the requirement to reinforce the planning principles in the administration of our country's economy. Individual financial and settlement relations that developed in past years took into consideration over the carryover factors, and in a number of instances, having been introduced without sufficient experimental checking of their effectiveness, failed to yield the expected results.

The 12 July 1979 decree of the CPSU Central Committee and the USSR Council of Ministers concerning the improvement of the economic mechanism stipulated the considerable reduction of uncentralized sources of financing of capital investments, in order to make the maximum use of the available resources in the chief areas of the development of the economy. However, in recent years one has noted the tendency toward an increase in the volume of above-plan capital investments at the expense of uncentralized sources, and this leads in many instances to the diversion of material and labor resources from the main

areas and fails to promote the intensification of our country's production potential.

The CPSU Central Committee repeatedly pointed out that the economic management of the job at hand must be carried out not only in the process of producing the output, but also in the process of its consumption. A considerable economic benefit, in our opinion, can be provided by the carrying out of a number of measures to improve and simplify the financial and settlement relations in the national economy. Let us consider a few of them.

An analysis of the report data indicates that the introduction of payment for production assets failed to exert a substantial influence upon reducing the reserves of commodity-and-material assets in the national economy or uninstalled equipment in capital construction. During recent years the growth of production reserves at the warehouses of many enterprises and economic organizations has been considerably outstripping the growth of production of output, operations, and services. The introduction of payment for assets also failed to exert the expected pressure upon limiting the needs for capital investments.

During the conducting of the wholesale price reform in 1967 and 1982, the expenses involved in the payment for assets were taken into consideration in the computations of the optimal profitability necessary to cover the branch planned expenditures. At the same time, on the basis of the established procedure, the payment for funds is not made if, with the introduction of payment at the norm of 3 percent or in construction-and-installation organizations 2 percent of the value of the production assets, the profit is insufficient for the formation of economic incentive funds. A considerable share of fixed assets is also freed from payment. Consequently, the payment for production assets that is currently being made into the budget differs greatly from the size of the payment that was taken into consideration when the wholesale prices were formed. That has created conditions for the unsubstantiated obtaining of profit at a number of enterprises as a result of the application of overstated wholesale prices.

It has been established that the payment for assets is made into the budget, as a rule, three times a month, and in individual instances for five-day periods. That means that every payer-enterprise must make no fewer than 36 deposits to the bank each year. Hence it is not difficult to compute the volume of the "paper stream" and the aimless labor performed by the bookkeepers at the enterprises, as well as the banks and financial agencies.

In our opinion, the problem of providing an incentive for increasing the effectiveness of using production assets can be resolved by a more economical means. For this purpose, instead of making payment for all the production assets, it would be desirable, in the form of a sanction, to make payment for above-norm reserves of commodity-and-material assets, including those that were credited by the banks, and the above-norm (above-plan) reserves of equipment of the construction sites in increased amounts. It would be desirable to compute this payment and to make the payment once a year on the basis of the average-monthly balances of the production assets from which the payment is being made. The enterprises that have been converted to the

normative method of distributing profit should make the payment for above-norm production assets from that share of the profit which remains at the disposal of the enterprises.

Payment for the water consumed by industrial enterprises was introduced in 1982. The water rates are established for the drainage areas of seas and major lakes. The expenses to pay for the water are taken into consideration in the production costs of the output being produced. It has subsequently been established that 50 percent of the payment is paid into the local budget at the place of location of the enterprise irrespective of its subordination every month.

The practice of applying the payment for the water consumed by industrial enterprises has shown that the established system suffers from substantial shortcomings. First, there has been revealed a considerable gap between the expenses for that purpose that were taken into consideration in the production costs, and the expenses that have been computed according to the rates. That provides the enterprises with the opportunity to "economize" the expenses involved in payment for water, and unjustifiably to obtain additional profit and deductions to be paid into the incentive funds. But coordinating these two indicators during the planning does not appear to be possible, because in the enterprises' reports the actual expenses to pay for water are not specifically isolated in the confines of the normative (limit) use of water. Consequently, in the process of composite planning, the additional expenditures in the even of above-limit expenditure of water are taken into consideration in the base indicators, thus overstating the production costs during the planned period.

Secondly, the payment to the local budget of 50 percent of the payment for water reduces the self-interestedness of the local agencies in the economical use of the water resources, since, in the event that the enterprises have economized with water, there is a reduction in the amounts of money coming into the local budget. As a result there arise contradictions between the national economy's need to economize resources, including water resources, and the interests of executing the local budgets. A study of this question in the outlying areas indicated that the payment to the local budgets for water (approximately 250 million rubles a year, or less than 10,000 rubles on the average per budget) did not render a substantial influence upon the reinforcement of the income base, inasmuch as the basic consumers of water resources are located in major industrial centers that are sufficiently provided with monetary resources for developing their economy. At the same time, the payment to the local budgets of a part of the payment for water leads to the equivalent reduction of the money paid into that budget from the turnover tax, and this reduces the self-interestedness of the local Soviets in increasing the production of consumer goods. As a result of the introduction of payment for water, there has been an increase in the number of settlement documents, as well as the correspondence with the financial agencies and banks, that is, conditions have been created for increasing the "paper flow" and the unproductive expenditure of labor.

It would seem to be desirable to have the agencies pay for water on the basis of regulating the use and the protection of water in increased amounts only in

that part that has been used in excess of the limit. In such an event, for purposes of granting the enterprises broader opportunities in regulating the expenditure of water, the payments should be determined from the consumption limits that are established for the quarter.

In 1958 the participation of enterprises and economic organizations in the building, remodeling, repairing, and maintenance of local motor roads was introduced. This was done with the purpose of involving the technology and material assets available at the enterprises and organizations in measures to improve road management. Prior to 1981 the participation of enterprises and organizations in road operations was carried out at the expense of searching for funds in the process of execution of the financial plan; that contributed to mobilizing the intra-economic resources in the national economy. At the present time the enterprises and organizations channel into this the planned profit and other sources stipulated in the financial plan, as a rule, in the amount of 0.3 percent of the volume of output, operations, and services, thus reducing the intra-economic sources for the financing of planned expenditures.

Practical life has demonstrated that the goal set is not being achieved. The percentage of in-kind expenditures in the form of the involvement of the machines, machinery, and material resources of the enterprises and organizations has been falling from year to year, and in a number of union republics this participation has been converted into direct monetary assessments. This is especially the case in that the road agencies have been granted the right to exact funds on a compulsory basis, and also to impose fines for refusal to participate in road operations. For example, in 1983 the expenditures in the form of the use of materials, transportation, machines, and machinery constituted slightly more than 20 percent of the total amount of the funds involved. In addition, in many union republics everything has been reduced to the extraction of monetary means to be paid to the accounts of the road agencies (the Uzbek, Lithuanian, Latvian, Kirghiz, Armenian, and Estonian [roads]).

At the same time inspections have indicated that in many instances the funds obtained from the enterprises are expended inefficiently, for other than the purpose for which they were intended, or are not used at all because of the lack of a material base for the conducting of operations. Thus, as of 1 January 1984 the balance of unused funds on the accounts of the road agencies came to 260 million rubles.

At the present-day stage a factor that is taking on great importance, as was emphasized at the March and April 1985 Plenums of the CPSU Central Committee, is the planned development of the economy. The development of the national economy, including the road management, in accordance with a single state plan is one of the advantages of the socialist method of production, and it must be used in full measure. The attraction of the funds of enterprises and organizations for these purposes without their being properly accounted for in the nationwide plan for the development of the national economy, in our opinion, is not providing an economic benefit. First, because the accumulation of funds is carried out unevenly in the various territories, without a consideration of the actual need, and there is no redistribution among the regions. Secondly, despite the establishment in the national-

economic plan of rigid use of material resources and additional assignments for economizing them, the enterprises cannot always allocate the material resources to the road agencies without detriment to the basic production activity. Then they are fined with no appeal possible. This limits the rights of the enterprises in the use of the funds that remain at their disposal, and this does not correspond to the line being carried out at the present time, which is aimed at the expansion of the rights, independence, and responsibility of the enterprises for the efficient use of material and financial resources.

The result of the system that has developed to provide for the material support and financing of the local road management is, despite the considerable investment of funds, the absence in a number of regions in the country of motor roads that meet the present-day technical requirements. This, in our opinion, is one of the reasons for the large losses of agricultural output when it is being transported from the sovkhoz and kolkhoz fields. It is for reason that people that roads are expensive, but lack of roads is more expensive.

It would appear to us to be desirable, as part of the state plan for the country's economic and social development for the 12th Five-Year Plan, to stipulate a nationwide program for the construction and modernization of motor roads, including local roads, at the expense of state capital investments, with the providing in full measure of technical means and material resources. In that instance the enterprise funds that are being handed over at the present time to the local road agencies should be channeled by way of the budget into the financing of nationwide measures. The expenditures for the capital repair and current maintenance of the local motor roads should be carried out at the expense of the local budgets on the basis of technical substantiated norms.

At the present time the funds from the motor-transport enterprises in the amount of 2 percent of their income are being invested in the construction of motor roads that are under republic jurisdiction. Those funds are included in the total costs of the transportation services and are taken into consideration in the approved rates for freight shipments, and, consequently, they are also taken into consideration in the transportation costs of the branches that use the services of motor transport.

If one considers from the practical point of view the existing system of financing the building of republic roads at the expense of the income of the motor-vehicle managements, there is no fundamental difference from the financing of their construction at the expense of the budget. But at such time one discerns certain negative factors. First, the receipt of funds is in no way linked with the need for the construction of new roads in the various regions, and as a result they cannot be used in certain regions. Secondly, the expenses for the construction of roads by means of the rates for freight shipments in the final analysis are transferred to the enterprises, lowering the level of their profitability. And, finally, the payment of the 2-percent deductions from the income of the motorbus managements that service the urban population, because of the application of low single rates for the hauling of passengers, has led in many instances to their operating at a loss. As a

result, these managements, while participating by means of monetary means in the construction of the republic's roads, themselves receive a subsidy to cover their expenses.

A factor of no small importance is the complication of the system of settlements between the motor-transport agencies and the road agencies, which complication leads to unproductive expenses. In our opinion, the building and remodeling of motor roads of republic importance must be carried out in accordance with a single national-economic plan at the expense of state capital investments, rather than at the expense of the income of motor transport. That would make it possible, first of all, to reduce the rate at which the urban motorbus managements are operating at a loss, and, secondly, by means of the reduction of the rates for freight shipments, to reduce the transportation costs in the national economy and thus to create a base for the reduction of the wholesale prices of industrial output.

It is well known that the guiding principles in the further improvement of wholesale prices must be the stabilization and the reduction of their existing level on the basis of scientific-technical progress, the increase in labor productivity, and the economizing of resources. With the forthcoming improvement of the wholesale prices and rates, one cannot fail also to take into consideration such an important factor as the their maximum level, which is limited by the level of the retail prices of consumer goods. Right now, for certain types of commodities intended for cultural and everyday purposes and for household use, the wholesale prices have proven to be higher than the retail ones. This has led to the introduction of a system by which the enterprises are reimbursed for the difference between the wholesale and retail prices, and this has been reducing their self-interestedness in the overfulfillment of the plan for production of inexpensive commodities that are greatly in demand among the public.

It would seem to us that the carrying out of all the measures that were mentioned above for improving the financial and settlement relations in the national economy would make it possible to achieve a considerable reduction in the intrabranh need for funds for the development of the economy and would create a good basis for improving the wholesale prices of the industrial output. According to our computations, the total amount of the reduction of the intrabranh need for funds in industry will come to no less than 30 billion rubles.

In addition, as was previously mentioned, the carrying out of the proposed measures can provide a considerable economic benefit by means of the reduction of the unproductive expenses that are linked with the carrying out of settlement operations by the enterprises and organizations; [by means of] the intensification of the supervision on the part of the financial agencies and banks over the use of funds in the road management for the purpose for which they were intended; the raising of the technical and organizational level of the construction, repair, and maintenance of the local motor roads, and on that basis, the reduction of the losses of agricultural output when it is being transported.

The question may arise as to whether the carrying out of the proposed measures will not lead to the increase in the investment of budgetary funds into the development of the branches of the national economy. No, that will not occur, since the funds that are being channeled at the present time into the budget in the form of payment for assets and payment for water, as well as the funds that are transferred to the road agencies, will be channeled into the financing of the planned expenditures of the branches and the budgetary appropriations will be correspondingly freed.

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CSO: 1820/260

INDUSTRIAL DEVELOPMENT AND PERFORMANCE

RENOVATION, RETOOLING OF EXISTING PLANTS, MAJOR POLICY GOAL

Kiev EKONOMIKA SOVETSKOY UKRAINY in Russian No 6, Jun 85 pp 47-49

[Article by V. Korsak, candidate of economic sciences, and V. Zhuchenko: "Technical Re-equipping of Enterprises: Problems and Prospects"]

[Text] Under the conditions of the changeover of the national economy to the chiefly intensive path of development, the task that comes into the foreground is the task of carrying out the technical re-equipping of existing production. The renovation of the production apparatus, its reproduction on a qualitatively new technical level, poses as its final goal the increase in the effectiveness of the economic-production activity of the enterprises.

The action both of the objective and the subjective factors in the process of technical re-equipping necessitates the systematization of the administrative effects in this area. However, the questions linked with technical re-equipping are not isolated from the overall circle of administrative problems. For example, in the subbranch of analytical instrument-building the entire totality of these questions has been unsystematically distributed among six organizations and departments of the administrative apparatus of the Soyuzanalitpribor VPO [All-Union Industrial Association], which in many areas duplicate one another and rely upon different base data in their computations, and this cannot fail to have an effect upon the quality of the decisions being made and the reliability of the information that is obtained during the computations. On the VPO level, this practice leads to a reduction in the effectiveness of the administrative effects, and contributes to the dissipation of capital investments and that, in the final analysis, reduces the effectiveness of their use.

The methodology that currently exists at the Soyuzanalitpribor VPO for the distribution of capital investments is based on compensating for the withdrawal of the active part of the fixed production assets because of dilapidation and wear and tear, and on the determination of the priority status of the production entities, proceeding from the degree of satisfying of the national economy's need for the output being produced by them. However, the first factor is the leading one.

Situations arise extremely frequently when individual copies of progressive technology are not written into the traditional technological process, and the

enterprises do not have sufficient funds for the fundamental reorganization of the technological chain. As a result, in the requisitions for equipment the only technology that is included is that technology that will make it possible to relieve a particular bottleneck.

Certain nonconformities also exist in the sphere of the formation and use of sources of funds at the expense of which the technical re-equipping of the enterprises is carried out. In order to form the production development fund, one transfers only part of the depreciation deductions for complete restoration (in 1981, 23.1 percent). And yet the expenses for technical re-equipping exceeded the production development fund by 38.6 percent. At the same time the money in the depreciation fund that is channeled into capital repair is not being completely used. In 1981 the funds that could have been used to carry out the reproduction policy constituted for the subbranch 15.2 percent of the total amount of depreciation deductions for capital repair, including 64.8 percent for machinery and equipment. The available depreciation deductions for capital repair to be paid are not being channeled into the production development fund, and the money in those two funds is not coordinated with the plans for capital investments and technical re-equipping.

There is no unity in the carrying out of the technical policy among the various functional departments of the enterprises themselves. This is reflected in the plant's basic planning document -- its "tekhpromfinplan" [technical, industrial, and financial plan]. An analysis of the tekhpromfinplans has shown that the expenditures stipulated in them for the carrying out of technical-organizational measures did not correspond to the stipulated limits for capital investments for technical re-equipping. The corresponding indicators in the capital construction plan also were not coordinated with the financial plan. The unity of the sections of the tekhpromfinplan was not observed, and the supervision on the part of the subbranch management over the expenditures of funds being channeled into technical re-equipping was made difficult.

The equipment acquired by the enterprises in most instances is used to expand the equipment pool. A paradoxical situation has developed: with the lack of any opportunity to guarantee the work load of the metal-processing equipment for even one shift, enterprises are continuing to stockpile a pool of that equipment. The enterprise's lack of self-interestedness in selling unused equipment leads to a lack of balance in the processes of introduction of new technology and the creation of work stations, and this has a detrimental effect upon the generalizing indicators of the economic effectiveness of production.

The difficulties that hinder the effective use of capital investments can be overcome by improving the planning of the technical development of the enterprise. The distribution of the limits for capital investments within the association, which has the goal of guaranteeing the stable annual growth of the volumes of production at all the enterprises, is economically unjustified. This is hindered by the shortage of labor resources and by the increase in the prices of equipment. But the crux of the matter is the fact that the acquisition of several machine tools, the modernization or replacement of some of the worn-out equipment, are obviously insufficient for the proportional

development of the technical base of the subdivisions at the enterprises. Moreover, more and more frequently there arises the situation when, in and of itself, the introduction of individual new machine tools causes the breakdown of the proportionality and creates sectors with excessive and insufficient capacities.

The technical policy within the confines of the subbranch must be aimed at the search for the most efficient and most effective technological decisions in the organization of the production process. Therefore the point of departure when implementing the technical policy must be the technological re-equipping of the enterprises. The designing of the pool of equipment for implementing the new technological decisions must be based on the requirements of the broadest and most complete introduction of technology with a high degree of automation of the production and auxiliary operations and the application of resource-saving technological schemes. The comparison of the technical parameters of the progressive equipment with the technology that is currently functioning at the plants in the subbranch makes it possible with complete confidence to conclude that the optimal technological and type-size structure of the equipment pool, which structure has been designed with a consideration of the indicated requirements, will guarantee at the re-equipped enterprise the minimizing of the expenditures of live and social labor and the increase in the volumes of production by 35-40 percent, with a stable number of workers. The implementation of this program stipulates, naturally, a considerable change and rejuvenation of the equipment pool, and this necessitates the replacement at certain enterprises of as much as 50 percent of the active part of the fixed production assets. Practically speaking, as a result of this fact, it is necessary to reproduce the structure of the equipment pool on a new, qualitatively higher level.

The centralization of the capital investments being allocated for technical re-equipping makes it possible to carry out comprehensive technical re-equipping with a fundamental change of the technological scheme for approximately 10 percent of the total number of enterprises each year. In other words, over the period of 10 years the production apparatus at all enterprises will be renewed. Capital investments should not be allocated to the enterprises for which comprehensive technical re-equipping has not been stipulated for that year. The equipment that has been installed at those enterprises must be maintained with the aid of capital repair.

When carrying out comprehensive technical re-equipping after the designing of the technological processes, one determines the optimal makeup of the equipment pool (with a consideration of its most complete work load and the use of the technical and size parameters). The new makeup of the pool will include not all the equipment existing at the enterprise: as much as 70 percent of the quantitative makeup will have to be taken out of the production process. Worn-out and obsolescent equipment (25-30 percent of the total pool) is to be written off. Equipment with an insignificant degree of wear and tear must be sent -- by means of transfer from balance sheet to balance sheet -- to reinforce the technical base of plants whose re-equipping is not planned in the immediate future. Excess equipment is to be sold, and the money received in this manner, by way of the production development fund, must be used to finance the comprehensive technical re-equipping.

The prepared requisitions for the equipment are sent to the ministry's capital construction administration, which guarantees the placement of the orders at the machine-building plants and that monitors their fulfillment. Something that should be considered a positive factor in this practice is not only the increase in the degree of substantiation of the requisitions, but also the systematizing of the structure of the output of machine building.

When carrying out comprehensive technical re-equipping, the greatest volume of operations is borne by the services of the chief technologists, which must carry out the development and adjustment of the old technological processes and itineraries, the designing of the corresponding rigging, the drawing up of the list of equipment by models for the preparation of requisitions, etc. The requirements that are made on the quality of the work performed by the collectives in these subdivisions will increase. In this regard, questions that are taking on special acuity are those that are linked with the reinforcement of the services with skilled specialists, inasmuch as at 22 enterprises in the subbranch that were studied, 15 percent of the workers in the technological services do not have secondary technical education. Not a single one of the shop technological services at the plants is completely staffed to the limit of its table of organization, and that table of organization, in addition, insufficiently reflects the need for technologists. Therefore in the job of improving the work of the technological services, a factor that takes on great importance is the development at the enterprises of ASUTP [automated systems for the administration of technological processes] and SAPR [automated design systems]. They will make it possible to reduce considerably the periods of time required to perform the operations of preparing the accompanying technological documentation and developing the rigging (by way of an example, one can cite the work experience of the Veda PO [production association] in Kiev). The introduction of these systems (with the existence of a bank of information concerning the existing standard sizes and shapes of the parts to be processed and the cost of fulfillment of a particular part-operation on the corresponding equipment) will make it possible to simplify the preparatory operations and to automate the process of designing the pool of production equipment.

A question that requires more detailed consideration is the question of the deadlines for and the procedure for carrying out the comprehensive technical re-equipping. According to the computations that have been made, the preparatory work must begin 1.5-2 years before beginning to carry out the measures. During that period it is necessary to carry out a series of operations to prepare the requisitions for the equipment and to transfer them to the branch's capital repair administration, which engages in the placement of the orders. To avoid disproportions, the equipment that arrives at the enterprise before the complete set of equipment should not be put into the old technological lines. By the beginning of the fourth quarter of the year in which it is planned to carry out the measures, the plant must have in its possession the complete set of equipment that has been ordered. The correctness of this practice is confirmed by the directive documents, where it is indicated that, in the event of the comprehensive shipment of technological equipment, technological lines, units, and means of mechanization, automation,

administration, and control, the customer settles with the general supplier for the delivered or installed set of equipment as a whole.

Depending upon the specific conditions, the arriving equipment can either be put into the warehouse, or, as is preferable, can be set up in available production areas. The fact that there is no shortage of these areas is confirmed by studies that have been carried out, as a result of which it was ascertained that at certain plants as much as 42 percent of the installed machinery pool does not participate directly in production as a result of its degree of wear and tear or its unsuitability for manufacturing the particular kind of output, or because the enterprise is not sufficiently provided with workers. The elimination of this technology or its sale to other enterprises will make it possible to free the necessary production areas and to carry out the replanning of the machinery and machine-assembly shops for the installation of the new equipment.

In the fourth quarter one carries out the replanning of the shops, the installation of the new equipment, the production of a start-up consignment, and the final adjustment of the technological documentation on the basis of the data provided by the start-up consignment. By the end of the year the enterprise must achieve the assimilation of no less than 60 percent of the introduced capacities. The achievement of these rates is not a fantasy: an example is known when the fundamental remodeling of a rolling mill was carried out at the Pervouralsk new pipe plant solely by the efforts of the ITR [engineer-technical workers] and the workers at the enterprise in a 34-day period.

In the year that follows the comprehensive re-equipping, the enterprise must achieve the rated capacity. The economic effectiveness of this practice is attested to by the following computations. Provided there is an annual buildup in the production of output by 6 percent, the volume of production at a conventional enterprise will increase by 68.9 percent in 9 years. But if, by the end of the first year, the comprehensive technical re-equipping is carried out, as a result of which the enterprise's capacity increases by 40 percent, subsequently all the enterprise has to do is to achieve an annual increase of 2.1 percent in the volume of production and it will achieve in the ninth year an absolute increase of 68.9 percent as compared with the first, base year. Actually, however, as has been shown by an analysis that was carried out by us, the average annual growth rates will be 2.5-3.2 percent, and they will be guaranteed only by means of the mobilizing of the enterprise's internal reserves, the target use of the funds for capital repair, and nomenclature shifts (we might recall that the capital investments will go to finance the technical re-equipping of another enterprise). The basic effect, however, is achieved by virtue of the fact that the "interest price" in the third year will be much higher than during traditional development. The total volume of production during the 9 years, according to the proposed version of development, will exceed by 11.8 percent the similar indicator with the traditional concept of conducting the technical re-

equipping. In the ninth year, conventionally speaking, one carries out the next comprehensive re-equipping.

When introducing this practice within the confines of a subbranch, as has been indicated by computations that were made by us, the average annual increase in the volumes of production will be 1.3 percent more than when carrying out the traditional technical policy. In addition, a positive factor is the simplification of the process of planning the volumes of production. When carrying out the long-term program of technical development in the subbranch with established deadlines for specifically-addressed, periodic setting up of the enterprises for comprehensive technical re-equipping, substantial changes will occur in the planning methodology. The reliability and substantiation of the plans will increase.

Thus, the advantages of comprehensive technical re-equipping are not only the achievement of higher growth rates for the volumes of production and the improvement of the use of capital investments and the assets in the depreciation fund, but also the opportunity for the technological services to organize the work "on the basis of deviations." With the existence of complete-operation technological documentation that has been worked out and adjusted on the basis of the results of producing the start-up consignment, realistic prerequisites are created for the technologists to enable them to work almost exclusively in the direction of raising the technological level and increasing the effectiveness of production and of individual articles. The concentration of the technological decisions and methods, the reduction of individual links in the technological scheme, mean the achievement of a higher concentration of the technological processes. With the changeover to the new concept of technical development, the conditions arise for the more complete guaranteeing of proportionality and planning in the development of production. At the same time the funds that are allocated for technical re-equipping will be used not for the purposeless acquisition of equipment, but for the improvement of the specific technological processes, which, in turn, will be developed in accordance with a single plan for the production of specific types of output.

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CSO: 1820/243

RESOURCE UTILIZATION AND SUPPLY

NEW INSTRUCTIONS FOR PLANNING INTERINDUSTRY SUBCONTRACTOR DELIVERIES

Moscow EKONOMICHESKAYA GAZETA in Russian No 30, Jul 85 p 14

[Article under rubric "Official Materials": "Plans for Interbranch Cooperative Deliveries"]

[Text] At the request of our readers we are publishing below the new Methodological Instructions for Developing the Plans for Interbranch Cooperative Deliveries, which were approved by USSR Gosplan on 5 April 1985, to replace the instructions that had previously been in effect since 1969 (the appendices to the Methodological Instructions are not printed here).

1. These Methodological Instructions stipulate the procedure for developing the plans for interbranch cooperative deliveries of pig iron, steel and nonferrous castings, forgings, hot stampings, articles made of metallic powders and plastics, welded metal structurals, as well as assemblies and parts that serve as components of machinery, equipment, motor vehicles, tractors, agricultural machinery, and trailers.

The basic task of preparing the plans for interbranch cooperative deliveries is the establishment of the most economical production ties among the enterprises, branches, and economic regions, with the maximum use of the specialized capacities of the supplier enterprises.

The basic form of the relations among the supplier and consumer production associations and enterprises must be direct prolonged economic ties that are established by plans for interbranch cooperative deliveries.

2. The plans for interbranch cooperative deliveries are developed by:

-- the Administration for Interbranch Cooperative Deliveries, USSR Gosplan: for cast-iron, steel, and nonferrous castings, forgings, hot stampings, articles made from metallic powders and plastics, and welded metal structurals;

-- Soyuzglavobshchemash, attached to USSR Gosplan: for assemblies and parts to serve as components of machinery and equipment;

-- Soyuzglavavtoselmash, attached to USSR Gosnab: for assemblies and parts for motor vehicles, tractors, agricultural machinery, and trailers to serve as components of machinery and equipment.

The plans for interbranch cooperative deliveries consist of two sections:

-- Section 1: deliveries to be carried out by production associations and enterprises on the basis of direct prolonged economic ties within the confines of the time period for which the long-term state plan for the economic and social development of the USSR has been approved. If, during that period, such ties and volumes of deliveries based on them are not changed in the established procedure, they are retained for the following planning period;

-- Section 2: deliveries to be carried out by production associations and enterprises during the year being planned. This section stipulates the reserve which is reviewed with the supplier ministries and departments in the organizational cross-section of the enterprises and is distributed by USSR Gosnab.

The plans for interbranch cooperative deliveries are elaborated with a consideration of the balance sheets and plans for the distribution of castings, forgings made of ingots, hot stampings, welded metal structurals, and articles made of metallic powders, which are approved by USSR Gosplan, the balance sheets for that output which are elaborated by the ministries, departments, and union republics, and the received requisitions and settlements.

4. The names and codes of the USSR ministries and departments and their subordinate production associations and enterprises, as well as the Gosnabs of the union republics, and the main territorial administrations of USSR Gosnab, are indicated in the plans for interbranch cooperative deliveries, and in the requisition documentation, in conformity with the All-Union Classifier of Enterprises and Organizations, and those of the ministries of the defense branches and their subordinate production associations and enterprises, in arbitrary names in the form of post-box numbers and codes.

5. The plan for interbranch cooperative deliveries stipulate the assignments for deliveries if the supplier or the customer is:

a) production associations, enterprises of all-union ministries and departments of the USSR;

b) production associations, enterprises of USSR Minenergo [Ministry of Power and Electrification], USSR Minneftekhimprom [Ministry of the Petroleum Refining and Petrochemical Industry], USSR Minugleprom [Ministry of the Coal Industry], USSR Minchermet [Ministry of Ferrous Metallurgy], USSR Mintsvetmet [Ministry of Nonferrous Metallurgy], USSR Minstroyaterialov [Ministry of the Construction Materials Industry], USSR Minpromstroy [Ministry of Industrial Construction], USSR Minmontazhspetstroy [Ministry of Installation and Special Construction Work], USSR Mingeo [Ministry of Geology], as well as the

production associations and enterprises of union subordinate of the other union-republic ministries of the USSR;

c) enterprises of republic or local subordination of various union republics.

6. The assignments for the cooperative deliveries for supplier and consumer production associations and enterprises that are part of the system of the same ministry or department are established by the plans for intraministerial (intradepartmental) cooperative deliveries.

All other cooperative deliveries are to be included in the plans for intrarepublic cooperative deliveries.

7. The plans for interbranch cooperative deliveries are approved by the management of USSR Gosnab and are issued with the stamp "For Official Use Only."

8. Consumer production associations and enterprises that have been converted to direct prolonged economic ties based on cooperative deliveries do not submit requisitions or other settlement data for the planned long-term period, but, if necessary, annually refine, upon coordination with the suppliers, the nomenclature, quantity, delivery deadlines, and other necessary terms for delivery of the output in the procedure established by the Statute Governing Deliveries of Output Intended for Technical-Production Purposes and by the Special Terms for Cooperative Deliveries of Steel, Cast-Iron, and Nonferrous Castings, Forgings, Hot Stampings, Articles Made of Plastics and Metallic Powders, and Welded Metal Structural, Assemblies, and Parts of Machinery².

Consumer ministries and departments of the USSR and the Councils of Ministers of the union republics submit requisitions to the appropriate supplier ministries and departments of the USSR and Councils of Ministers of the union republics;

-- for shipments to be carried out by production associations and enterprises that have been converted to direct prolonged economic ties, when the need for the year being planned exceeds by 3 percent the volume of deliveries in the current year, which was stipulated by the plan for interbranch cooperative deliveries;

-- for shipments to be carried out by production associations and enterprises in the current year on the basis of Section 2 of the plan;

-- for new deliveries, the need for which has been determined in the period being planned.

In the plan for interbranch cooperative deliveries, the quantity of the output to be delivered to production associations and enterprises on the basis of direct prolonged economic ties is determined for the entire effective period of the plan, with a numerical breakdown by individual years. In the event of need, the volume of delivery that is approved in the plan is refined by USSR Gosnab.

For deliveries to be carried out by production associations and enterprises that have been converted to direct prolonged economic ties, the refined planned volume for the current year, a report for which is submitted by the production association or enterprise, is the delivery volume that has been stipulated by contract.

9. For inclusion in the plan for interbranch cooperative deliveries, the consumer production associations and enterprises submit requisitions³ to the supplier production associations and enterprises prior to 15 April of the year preceding the year being planned:

-- for output the plan for which is being elaborated by the Administration for Interbranch Cooperative Deliveries, USSR Gosplan;

-- for output the plans for which are being elaborated by Soyuzglavobshchemash and Soyuzglavavtoselmash, attached to USSR Gosplan, on the form in accordance with Appendix 2.

10. Supplier production associations and enterprises consider the requisitions that have come in and within ten days communicate the result of their consideration to the customer production associations and enterprises, and to the Gosplans of the union republics or main territorial administrations of USSR Gosplan in whose area of activity the suppliers are located -- prior to 20 May of the year preceding the year being planned.

11. The supplier and consumer production associations and enterprises annually submit, prior to 20 May of the year preceding the year being planned, to the superior organization, the Gosplan of the union republic, or the Main Territorial Administration of USSR Gosplan in the area of whose activity they are situated the balance sheets for the production and consumption of steel, cast-iron, and nonferrous castings, forgings, stampings, welded metal structurals, and articles made of metallic powders, on Form 14-pprom, which is approved by USSR Gosplan.

12. The consumer production associations and enterprises submit, prior to 20 May of the year preceding the year being planned, to their superior organization and to the Gosplan of the territorial administration of USSR Gosplan in the area of whose activity they are located requisitions (on forms in accordance with Appendices 2 and 3), a statement concerning the results of coordinating the deliveries (on the form in accordance with Appendix 4), and a computation of the need for uncoordinated deliveries (on the form in accordance with Appendix 5).

13. Supplier production associations and enterprises, prior to 20 May of the year preceding the year being planned, submit to their superior organization and to the Gosplan of the union republic or to the main territorial administration of USSR Gosplan in the area of whose activity they are situated a list of the coordinated items with an indication of the volumes of deliveries and the unregulated questions.

14. Consumer ministries and departments of the USSR and the Councils of Ministers of the union republics consider the requisitions, balance, sheets,

and computations of needs which are received from their subordinate production associations and enterprises, refine them, and forward the requisitions for coordinations prior to 5 June of the year preceding the year planned, to the appropriate supplier ministries and departments of the USSR and Councils of Ministers of the union republics.

15. Supplier ministries and departments of the USSR and Councils of Ministers of the union republics consider, jointly with the consumer ministries and departments of the USSR and Councils of Ministers of the union republics, the requisitions for interbranch cooperative deliveries. The coordinated volumes and discrepancies that arise in the process of considering the requisitions are formalized by a statement concerning the results of the coordination, on the form in accordance with Appendix 4.

16. Consumer ministries and departments of the USSR and Councils of Ministers of the union republic submit, for the corresponding products list, to the Administration of Interbranch Deliveries, of USSR Gosplan, and to Soyuzglavobshchemash and Soyuzglavavtoselmash, attached to USSR Gosplan, ten days before the deadline indicated in the schedule for the consideration of the discrepancies, as stipulated by paragraph 17 of these Methodological Instructions, statements concerning the results of the coordination of the deliveries being requisitioned for inclusion in the plan for interbranch cooperative deliveries on the form in accordance with Appendix 4; for uncoordinated deliveries, requisitions and computation data are submitted on forms in accordance with Appendices 2, 3, and 5.

In the event that there are no discrepancies for all the deliveries with regard to an individual type of output, the statement concerning the results of the coordination of the deliveries to be requisitioned for inclusion in the plan of interbranch cooperative deliveries is submitted by the same deadline.

If it is necessary to refine the need for individual plan items that have been coordinated with supplier ministries and departments of the USSR and Councils of Ministers of the union republics, the computational data on the form in accordance with Appendix 5 and other materials are submitted to consumer ministries and departments of the USSR and Councils of Ministers of the union republics at the request of the Administration of Interbranch Cooperative Deliveries, of USSR Gosplan.

17. The discrepancies that have arisen in the course of the consideration of the requisitions for interbranch cooperative deliveries among the supplier and consumer ministries and departments of the USSR and Councils of Ministers of the union republics are considered by the Administration of Interbranch Cooperative Deliveries, of USSR Gosplan, and by Soyuzglavobshchemash and Soyuzglavavtoselmash, attached to USSR Gosplan, with their participation and with the participation of the corresponding territorial agencies in the USSR Gosplan system within the deadlines according to the approved schedules by the management of USSR Gosplan.

18. Supplier and consumer ministries and departments of the USSR and Councils of Ministers of the union republics submit annually, prior to 15 June of the year preceding the year being planned, to the Administration of Interbranch

Cooperative Deliveries, of USSR Gosplan, the balance sheets for steel, cast-iron, and nonferrous castings, castings, hot stampings, welded metal structurals, and articles made of metallic powders on Form 14-pprom, approved by USSR Gosplan.

19. The Gosplan of the union republics and the main territorial administrations of USSR Gosplan, on the basis of a study of the production capabilities of the associations and enterprises situated in the area of their activity, submit annually, prior to 10 June, to the Administration of Interbranch Cooperative Deliveries, of USSR Gosplan, recommendations for improving economic ties, on the form in accordance with Appendix 6. The improvement of the economic ties is carried out by USSR Gosplan with the participation of the supplier and consumer ministries and departments of the USSR and Councils of Ministers of the union republics.

20. The Gosplan of the union republics and the main territorial administrations of USSR Gosplan provide excerpts from the plan for interbranch cooperative deliveries, and information concerning their subsequent changes, for the information of the supplier and consumer production associations and enterprises and the statistical agencies at the supplier's location within ten days after their receipt from USSR Gosplan.

21. USSR ministries, other than those in the defense branches, and departments, no later than 10 June of the year preceding the year being planned, submit to the Administration of Interbranch Cooperative Deliveries, of USSR Gosplan, for purposes of coordination, a list of the newly organized deliveries of castings, forgings, hot stampings, welded metal structurals, and articles made of plastics and metallic powders on the basis of intrabranch cooperative actions beyond the confines of the economic region of the RSFSR or union republic on the form in accordance with Appendix 7.

22. The Administration of Interbranch Cooperative Deliveries, of USSR Gosplan, and Soyuzglavobshchemash and Soyuzglavavtoselmash, attached to USSR Gosplan, can make, over a period of three quarters in the current year, taking into consideration the manufacturing cycle for the output being planned, changes and refinements in the volumes and products list for individual deliveries by drawing against the reserve stipulated by the plan, and also by drawing against the redistribution of the volumes of deliveries when there is a change in the production plan for articles for which the cooperative deliveries are intended. In the event of nonuse, as of 1 October, of the reserve, the Gosplan of the union republics and the main territorial administrations of USSR Gosplan formalize the withdrawal of the reserve, which can be used by the supplier for fulfilling unforeseen operations and for increasing the carryover reserve.

23. The Gosplan of the union republics and the main territorial administrations of USSR Gosplan make refinements for the current year in the planned volumes of the individual deliveries for Section 2 of the plan, which evolved from agreements achieved during the concluding of contracts and in the process of their execution, and also as a consequence of nonfulfillment by the consumer production association or enterprises of the terms stipulated by paragraph 9 of the Special Terms for Cooperative Deliveries. The refinements

of the plan for deliveries of output which are to be carried out on the basis of direct prolonged economic ties (Section 1 of the plan are made during the current year by the Gossnabs of the union republics and the main territorial administrations of USSR Gossnab in the event of absence of requisitions or the refusal by the consumer production association or enterprise to conclude a contract during the year being planned, and also as a consequence of the nonfulfillment by the consumer production association or enterprise of the terms stipulated by paragraph 9 of the Special Terms for Cooperative Deliveries.

The refinements of the plan for interbranch cooperative deliveries are communicated on the form in accordance with Appendix 8 to the supplier and consumer enterprises, and to the appropriate USSR ministries and departments, and for enterprises of republic and union-republic ministries, respectively to RSFSR Gosplan, UkSSR Gosplan and BSSR Gosplan, and the oblast (kray) or republic statistical administration at the place of location of the supplier enterprises, and the generalized information about the refinements made in the plan and the information concerning the changes of the contractual volumes for the deliveries to be carried out in accordance with direct prolonged economic ties are communicated to the Administration of Interbranch Cooperative Deliveries, USSR Gossnab, and to Soyuzglavobshchemash and Soyuzglavavtoselmash, attached to USSR Gossnab.

FOOTNOTES

1. Hereinunder referred to as "Plans for Interbranch Cooperative Deliveries."
2. Hereinunder referred to as "Special Terms for Cooperative Deliveries."
3. Requisitions for slit cowls, ball caps 30 and 40 millimeters in diameter, and plastic parts of low indicators are submitted by the consumer production associations and enterprises only to the Gossnab of the union republic or main territorial administration of USSR Gossnab which, on the basis of the requisitions of the consumer production associations and enterprises situated in the area of its activity, submit, prior to 1 June of the year preceding the year being planned, to the Administration of Interbranch Cooperative Deliveries, USSR Gossnab, a composite requisition for that products list with an indication of the organization in the USSR Gossnab system that is the recipient of the output.

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CSO: 1820-241

ECONOMIC MODELING AND COMPUTER TECHNOLOGY APPLICATION

DRIVE TO INTRODUCE COMPUTER TECHNOLOGY IN PLANNING STRESSED

Moscow EKONOMIKA I MATEMATICHESKIYE METODY in Russian No 4, Jul-Aug 85 pp 610-624

[Article by Ya. M. Urinson, Moscow, under rubric "National-Economic Planning and Forecasting": "Methodology Problems in the Further Development of ASPR"]

[Text] In the Basic Directions for the Economic and Social Development of the USSR in 1981-1985 and For the Period Until the Year 1990, it is stated, "Introduce and make effective use of an automated system of planning computations" ("Materialy XXVI syezda KPSS" [Materials of the 26th CPSU Congress], Moscow, Politizdat, 1981, p 198). Under present-day conditions the introduction into the practice of planning work of methods of economic mathematics and electronic computer technology is an important means of resolving the tasks of improving the entire economic mechanism and the creation of automated control systems.

The completion of the introduction of the ASPR [automated system of planning computations -- hereinunder ASPC] in the 11th Five-Year Plan does not mean that subsequently that system will remain unchanged. Obviously it will improve together with the progress of economic science, mathematical methods, and computer technology, and on its own systems base that that was created as the result of the activation of its first [1] and second [2] phases. In this regard it is necessary right now to determine the scope of the most important long-range problems and to develop the possible approaches to their resolution so as to assure the appropriate orientation of the scientific-research and design operations of a system-wide nature.

Among these problems the ones that are of special importance are those that pertain to the methodological support of the ASPC. The building of an ASPC is not a goal in itself, but, rather, a means of implementing the basic directions for improving planning on a modern scientific-technical base. It is precisely in the methodological support of the ASPC that the theoretically substantiated methods of improving the practice of planning work are rendered in a concrete form in the functional structure of the system, the makeup of its economic-planning tasks, and the logical sequence and methods of resolving them, and one sees the formulation of the requirements with regard to the means of technical, mathematical, informational, and other types of support that are necessary for the planning process that is being designed. Therefore

the level of development of the methodological problems determines to a definite degree the direction and effectiveness of the further development of the ASPC. It is certain questions which, in our view, are vitally important with regard to the system-wide methodological support of the ASPC that are discussed in this article.

1. Methodological Support of the ASPC and the Technology of Planning

The creation of an ASPC, according to its concept [1], is viewed not as a one-time act of replacing the existing system of planning with a new one that was constructed "alongside" of it, but as a continuous process of improving planning practice in conformity with the objective requirements of the time and on an adequate scientific-technical basis. Therefore the creation of the methodological support of the ASPC represents the consistent enrichment of the methodology and methods of planning by means of the capabilities revealed by the practical application of modern methods and means of information processing.

The rather general but at the same time sufficiently subject-oriented definition of the methodology of planning that is given in [3] and which we are following here, differs in that, as one of its most important factors, consideration is taken of the logic of the planning process. Although this problem in one form or another was discussed as long ago as the period of the origin and development of the theory and practice of developing the national-economic plans (the discussions of the 1920's and 1930's with regard to the question of the takeoff point of the plan, with regard to the balance sheet for the national economy, etc.), it acquired special importance in the 1960's in the light of the tasks for improving planning that had taken on great immediacy. The adoption as its takeoff point, under the conditions of developed socialism, of the final social needs and the orientation, for purposes of their most complete satisfaction of the decisions concerning the prospects for economic development, on the optimal use of resources make it possible to substantiate in a theoretically rigid manner both the overall sequence of the development of the plans in their single system, and the posing of specific economic-planning tasks.

In [4, Chapter 1, section 2], on the basis of a thorough analysis of the concept of the logic of planning, the author reveals those fundamental changes that its directedness toward the final needs and optimization of the distribution and use of resources make in the methodology of preparing the national-economic plan as a whole and its most important sections, and in the methods of substantiating the system of planning indicators. [5] shows what constructive conclusions follow from the implementation of the planning logic that is based on the combination of the target approach and the resources approach with the leading role of the former. Thus, its development influences the very important methodological principles that define the structurization of the process of planning, the makeup and content of the economic-planning tasks that form it, and the requirements on the methodology of realizing them.

The scientific principles of socioeconomic planning that were developed by V. I. Lenin on the basis of Marxist theory and that received irrefutable confirmation in our country and in other socialist countries remain complete in force to this day. At the same time the methods and means of realizing them in the process of planning work require further development under the conditions of mature socialism.

The problem consists in assuring that the absolutely fundamental principles of socialist planning are embodied in the plan, in accordance with the scientifically substantiated logic of developing it, using the entire arsenal of the time-tested methods and the new capabilities that are revealed by the application of methods of economic mathematics and electronic computer technology. It is precisely to the resolution of this problem that the development of the methodological support of the ASPC should be directed, which support has been called up to be, in the words of Academician V. S. Nemchinov, that theory of planning computations, the necessity and the ever-growing pertinency of which he foresaw [6, p 165].

In this understanding the methodological support of the ASPC determines the content of the process of developing the current and long-range plans and the monitoring of their fulfillment under the conditions of the system application of methods of economic mathematics and electronic computer technology; forms a complete list of the corresponding tasks; and establishes the sequence of their resolution, that realize the scientifically substantiated logic and the basic principles of the process of preparing and fulfilling the plans; and makes it possible to select the methods of resolving these tasks and coordinating them with one another. Thus the methodology and methods of planning in the final analysis are expressed in the specific procedures of the transformation of the economic-planning information in the course of execution of the necessary computations, and the substantiation and making of the economic decisions. And it is in this sense that the methodological support of the ASPC characterizes the technology of planning in its broad understanding.

In the technological scheme that is designed as part of the methodological support of the ASPC one can arbitrarily isolate a content part and a formal part. The former includes the design image of the single system (and its internal interrelationships) of plans of varying duration, the structure (based on vertical and other sections) of each of them, and the makeup of the indicators; the structure of the generalized planning functions of the ASPC, the tasks that reveal those functions, and the logical sequence of their joint resolution. Obviously, the content part of the technological scheme that is being planned for the ASPC is determined not by the specific requirements of automation, but by the essence, goals, and tasks of the planning guidance under the conditions of developed socialism, by the peculiarities of the economic mechanism that is in effect, and by the prospects of improving it.

In the first part of the methodological support of the ASPC the design decisions are recorded by the appropriate models of the planning processes, by the description in the established form of the structure of the plans and the makeup of their indicators, and by the requirements pertaining to all the functional and other supporting subsystems of the ASPC. The second part of

the technological scheme is formed by the methods of developing the plan and the monitoring of the course of its fulfillment, which are intended for the realization of the generalized planning functions in the process of the intercoordinated resolution of the economic-planning tasks in accordance with their makeup and the logical sequence that is established in the first part. Expressed in the specific methodologies, methods, and means of making computations, substantiating, and making planning decisions, they act, in the aspect being considered here, as a form of carrying out the content part of the technological scheme of planning.

In complete conformity with the dialectics of the interaction between form and content, the formal part of the technological scheme for planning possesses a certain independence relative to its content part and within the given limits is determined by the specific requirements of automating the process of preparing the plans and monitoring their realization. These requirements consist in the possibly more complete structurization and regulation of the planning process and the isolation of those economic-planning tasks, procedures, and operations that can be described in formal language and implemented with the use of electronic computers. A very important element of the methodological support of the ASPC is the economic-mathematical models of the objects of planning and the methods of making computations for them. Inasmuch as, by virtue of objective reasons in the technological scheme for planning, in all instances there occur informal, heuristic decisions, in the methodological support there must be a definition of the the procedures for making them and the methods for coordinating them with the formalized operations in the process of the functioning of the ASPC as a man-machine system.

Consequently, in its developed form the methodological support of the ASPC must encompass the structure and system of indicators of the state plans for economic and social development, the makeup and procedure of the fulfillment of their functions and tasks, and the total set of methods of developing the plans and the means for uniting all these elements in the single technological scheme for planning.

Thus, the methodological support of the ASPC does not crowd out and does not replace the methodological scheme for planning, and the economic-mathematical methods and models included in it do not contradict the other methods of preparing the plans, as certain authors feels [5, pp 42-34, 406; 8, p 50]. Just as "there cannot be two parallel economic theories of socialism -- with the application and without the application of mathematics, but there is a single Marxist-Leninist science" [9, pp 15-16], there cannot be two parallel theories of planning, but there is a single science in the confines of which, in organic unity with the methodology and methods of planning, its technological scheme must be researched. At the same time, the application of modern methods of planning computations and means of information processing in the real technological scheme of planning enriches its methodology and methods, and intensifies and increases the effectiveness of planning activity as a whole.

As is well known, one of the most essential peculiarities of modern scientific-technical progress consists in the fact that the greatest practical

effect is produced not by the self-contained introduction of individual innovations, but by the development and realization of new technological schemes that are based on the comprehensive use of the achievements of science and technology. This is typical not only of material production, but also of the sphere of administration. As applicable to ASPC, the need to take this peculiarity into consideration means that in the development of the methodological support of the system the accent must be shifted from the designing of individual economic-planning tasks and the methods of resolving them to the creation of technological processes for the development of various sections of the plan which in the final analysis must form the single technological scheme. Naturally, it is differentiated according to the various modes of planning and the various stages of development of the current and long-range plans.

This conclusion is confirmed by all the experience of designing and introducing ASPC. In its first phase, against a background of the resolution of the system-wide methodological problems that found reflection in the draft of the system that was adopted in 1977, and the development of the minimally necessary supporting means (technical, mathematical-program, informational, etc.), the computations that predominated in the makeup of the introduced economic-planning tasks were the local ones, and that substantially reduced the effectiveness of the practically employed methods and means of the ASPC as a whole [1, Chapter 20]. In the second phase of the system in the current five-year plan a qualitatively new level is being achieved primarily by means of the assimilation of major integrated complexes of planning computations (in the ASPC of USSR Gosplan, this is the central complex of tasks (TsKZ) in the mode of five-year planning, the complex of computations of: annual plans for production, capital construction, and their material-technical support; for demography and labor resources; and indicators of the plan for foreign trade, etc. [2]), within the confines of which the methodological, informational-computational, and organizational problems are resolved in a coordinated manner and the technological processes of developing the appropriate sections, assignments, and plan indicators are formed.

However, in order, during the 12th Five-Year Plan, to achieve the practical realization in the ASPC of the course aimed at the priority development and introduction of comprehensive technological schemes, it is necessary to expand considerably the corresponding scientific and designing backlogs.

In particular, it is necessary to achieve the further development and refinement of the concept itself of the technological scheme for planning. Usually when constructing automated control systems, in economic cybernetics, the term "technological scheme" is used as applicable to the direct processing of the data in order to designate the "total set of methods, means, and processes intended for processing the information by means of the transformation of its character carriers" [10, p 580]. In the ASPC this series of questions is resolved in the technological-support subsystem [1, Chapter 17]. However, it is also proper to consider the technological scheme of planning as a whole. In [11] the author reveals its link with the logic of that process, and analyzes the specifics of the automated technological scheme for the development of the plan. In [12], with the aid of the results described in [11], and on the basis of the generalization of the experience of

creating the methodological support of the ASPC, the technological scheme for planning is defined as the expression of the unity of its methodological, organizational, and informational aspects and provides its extended description as applicable to the level of composite national-economic planning. In [13], proceeding from the understanding of the technological scheme of planning as a "listing and classification of the economic-planning tasks, and the sequence and methods of resolving them" [13, p 66], the author describes a fragment of that technological scheme which can be realized with the use of the economic-mathematical models being built at IE OPP [expansion unknown].

The attempt to outline the general principles of the formation of an automated technological scheme for developing the basic indicators of the five-year plan, to substantiate their most important elements, and to design and to check experimentally that technological scheme was undertaken in the course of the creation of the TsKZ for the ASPC of USSR Gosplan [14, 15]. However, many problems that were revealed in the course of creating and introducing this major inter-subsystem complex, the first in the practice of the building of an ASPC (in particular, the methods of designing such complexes and the technological schemes based on them [16]; the formalized description of the automated technological scheme for the construction of the plan, which description could be used in administering the planning process [17]; the combining of the economic-mathematical models, as well as combining together the formalized operations and the heuristic procedures in making planning decisions within the confines of the single technological scheme [14], etc.) are still awaiting their decision. The vital importance of research on the technological scheme for planning, in its broad understanding, is confirmed by the experience of creating automated systems in the planning agencies both in our country and in the other socialist countries [18, section 15].

The further improvement of the technological scheme of planning under conditions of the functioning of the ASPC is linked in the most direct manner with the improvement of its various aspects. Therefore, in addition to the overall questions of developing the national-economic plans, there is also a need to develop and deepen the designing decisions for the individual elements of the methodological support of the ASPC, which decisions were previously made in the draft [1, Chapter 5]. Let us consider briefly some of the problems that have become vitally important in this area and that pertain to long-term planning, the system of planning indicators, and planning methods.

2. Methodological Support of Long-Term Planning

The further development of the procedure for long-term planning -- which procedure is developing in conformity with the 12 July 1979 Decree of the CPSU Central Committee and the USSR Council of Ministers, entitled "Improving the Planning and Intensification of the Effect of the Economic Mechanism Upon Increasing the Effectiveness of Production and the Quality of Work" -- requires the intensification of the role and the raising of the level of the scientific substantiation of the long-term planning decisions, primarily by means of their three-stage development. The specifics of that plan that

defines the gauge and the ways to realize the party's long-term socioeconomic policy consists primarily in its orientation toward the most fundamental tasks in that area, with a very important factor in the attainment of the assigned goals being scientific-technical progress, which makes it possible to achieve a fundamental change in the volume, makeup, and the directions for the reproduction and use of resources. At the same time, it is precisely in the very long-range prospect that the decision of the major social tasks acts not only as a goal in itself, but also as a powerful accelerator for economic development.

In the long-term plan one also sees the fullest effect that the measures involving the comprehensive improvement of the economic mechanism which must be an inseparable component part of it have upon the growth and the increase in the effectiveness of social production. The specifics of the content of the long-term plan also influence the peculiarities of its development, the most important of which are the primary importance of scientific-technical and socioeconomic forecasting, the formation and size-ranking of the system of goals, and the use of comprehensive target programs as the central link in the entire plan. Whereas, for the five-year period and even moreso for the yearly period, the planning decisions are to an essential degree influenced by the start-up level of development of the economy and the resource factor exerts a strong influence upon the technological scheme for the development of the corresponding types of plan, for the long-term prospect that encompasses three five-year plans the logic of planning on the basis of needs is realized most completely.

All this makes desirable the isolation of three stages in the long-term planning mode: the conception, the basic directions, and the draft of the plan. The exclusion of the first stage would lower the level of the scientific substantiation of the most important planning decisions and, in essence, would mean the rejection of the principle of alternatives (in the broadest sense of the term) when preparing the long-term plan as a whole. At the same time the elimination of the plan draft stage would lead to a lessening of the orienting role and effectiveness of the planning decisions. One can scarcely consider to be convincing the arguments in favor of refusing to prepare and confirm the long-term plan as an independent document, which arguments lie in the assumption that the high degree of indefiniteness when preparing it makes it possible to guarantee the concreteness, directive-orientation, and specific addressing of the assignments and indicators for the long-term period at the level that is typical only of the basic directions. Because, in addition to the large amount of indefiniteness in the long-term prospect, there is much broader freedom in varying the resources, the levers of planning influence are substantially more powerful, and the compensating capabilities of the reserves are higher (see [19]).

As for the concreteness of the long-term designs, that concreteness lies not defining, for a broad products lists, the planning indicators and establishing the assignments for the production of output and the limits for the resources for specific enterprises, but, rather, in ascertaining the specific goals of socioeconomic development, the priorities in achieving them, and the required level of satisfaction of the final needs (rather than the volumes of production of the types of output by means of which they are guaranteed), the

key directions of the structural policy, and the assigning of the corresponding tasks to the central planning agencies, the most important national-economic (interbranch and multibranch) and major territorial-production complexes, and to the scientific institutions and organizations. The plan can also define the indicators that characterize the final results of the functioning of those complexes (including the production of the most important types of output, expressed in physical terms) and the resources stipulated for their development. In the long-term plan it is also possible to isolate individual especially important and large-scale projects (on the same level as the BAM [Baykal-Amur Mainline], KAMaz the East-West gas pipeline, etc.). The concreteness and specific addressing of its indicators are also influenced by the objectively necessary and possible accuracy of the long-range planning computations [20].

Although at the stage of the draft planning there was an extremely serious consideration of the questions of the three-stage elaboration of the long-term plan under conditions of the financing of the ASPC [1, section 7.1], during the construction of the second phase of the system the proper attention was not directed to that mode of planning. Thus, in the second phase of the ASPC, as compared with the first phase, the number of tasks to be resolved in the process of long-term planning, practically speaking, does not grow, and, consequently, their proportion in the event of the rapid growth of the total number of tasks drops sharply. Whereas in the creation of single technological schemes for five-year and annual planning a noticeable step forward was taken as early as the current five-year plan when introducing, respectively, the central complex of tasks and the complex of computations for the plan of production, capital construction, and their material-technical support, the elaboration of the integrated complex of balance-sheet computations for long-term planning was brought, essentially speaking, only to the live of the predesign substantiations [2]. Meanwhile it is obvious that without the preliminary resolution of the problem of the technological scheme for long-term planning one could scarcely speak about the creation in the ASPC of sufficient conditions for the effective elaboration of a single system of current and long-term national-economic plans as a whole. Therefore the first-priority attention should be paid to these problems in the further development of the methodological support of the ASPC.

3. Improvement of the System of Planning Indicators

In the theory of planning, general methodological approaches have been worked out for constructing a system of planning indicators; some of them have been realized in practice, and others are being implemented [3, 7, 21, etc.]. There has also been a scientific substantiation of the prospects for the development of the indicated system, which prospects are opened up by the creation of automated control systems in the national economy [5, 11, 22, etc.]. Proceeding from this, in the system-wide methodological support of the ASPC there has been a definition of the basic principles of the formation of the system of planning indicators (purposefulness, completeness and comprehensiveness, integration and differentiation, specific addressing and directive-orientation) and the ways to achieve their practical realization

have been set down, and the corresponding requirements have been formulated for the subsystem of the informational support of the ASPC [1, section 5.3].

However, until the present time a number of problems that pertain to the system of planning indicators have not received their final resolution, as a result of which the system-wide design decisions that have been made with regard to certain methodological questions of elaborating and introducing the system of indicators in the ASPC are of an excessively general nature, and that had an influence also upon the designing of individual functional subsystems¹. They include the tasks of improving the computed and approved planning indicators, the use of in-kind and value indicators, and their composition in certain sections of the plan (primarily the long-term), and the role and place of the normative indicators.

An analysis of domestic experience and the experience of the CEMA member countries attests to the fact that "at the present-day stage of the development of the economy of the countries in the socialist community, there has been an increase in the role in the administration of the national economy both of the planning directives that are worked out in a centralized manner, and the regulating effects that are carried out by way of the economic mechanism" [18, p 81]. During this process the intensification of the centralized principle is guaranteed not by the expansion of the number of the specifically addressed planning indicators that are approved from the top, but by the reduction of their number by means of the purposeful selection of their composition and the application of long-term economic standards (mandatory for all and in this sense not specifically addressed). However, the replacement of one of the approved indicators by another one (carryover; from gross output to sold, from sold to normative-net; with the establishment of assignments for the production of specific output expressed in physical terms -- from some units of measurement to others, for example, from tons to meters, from physical units to standard ones, etc.) does not mean that the first is excluded from those that are necessary for planning computations and substantiations. The use of the indicator of normative-net output as the approved indicator does not reject the application of the indicator of gross output in the computations involved in substantiating the production plan in the branch subsystems, as well as the general-economic proportions, the branch structure of production in the composite subsystems of the ASPC. At the same time the value indicator of the normative-net output, while making it possible to measure the labor productivity in a more substantiated manner, to formulate on the basis of norms the wage fund and to reflect better (than the indicators of gross or sold output) the result of the activity of the particular economic link from the point of view of the creation of output, does not take into consideration to the sufficient degree its contribution to the nationwide fund of resources or the level of satisfaction of the need for output.

The most complete appraisal, in terms of value, of the final results of the economic link, if one considers it as the contribution to the resource fund, is provided by profit (which embodies the economizing both of live and embodied labor)² -- of course, with the proviso of the establishment in the plan of the necessary in-kind proportions and, correspondingly, with organized price-formation. But the level of the satisfaction of needs is evaluated by means of the in-kind indicators that characterize the consumer value. Simply

the volume of production "in kind" cannot act as such. It is necessary for fulfilling the balance-sheet and other planning computations, but even in the event of any conceivable expansion of the products lists of the output that is planned in a centralized manner and the most felicitous choice of the in-kind units of measurement, it is incapable of reflecting all the properties of the particular articles which are important for a particular consumer. Hence there evolves the need to establish assignments for the volume of production, expressed in physical terms, as the total amount of produced output that is used for offsetting the concluded contracts and production orders, and the evaluation of the fulfillment of the production plan depending upon the strict and complete observance of the shipment pledges (which, in the final analysis, represent the concrete expression of the planned in-kind proportions that were mentioned in connection with the profit indicator).

Practical life confirms that the smooth organization of the economic mechanism under the specific conditions of the real economy with all its peculiarities and problems (disproportions in the "start-up" level, the inertia of mental processes, etc.) is an extremely complicated matter, and "trial and error" situations are not precluded. Therefore, in the design decisions for a system of planning indicators it is desirable to have an "invariability" with respect to the existing economic mechanism in the sense of having the ability for formulate in the ASPC a sufficiently complete set of indicators from which, when preparing the next five-year plan (the section for improving the economic mechanism must be a mandatory component part of it), one can "select" the approved and computed, in-kind and value indicators that correspond to the conditions being planned.

It is obvious that their complete set, in addition to the ones that have been traditionally used in practice, should also include the new ones, some of which have been known for a long time but which have not yet found the proper application, and others of which can be obtained only on the basis of the use of economic-mathematical methods. In particular, it is known that the traditional descriptions of the dynamics and structure of the national economy, and the effectiveness of social production and the use of resources by no means completely reflect the processes that are occurring in the modern economy. Meanwhile, those indicators that carry within themselves fundamentally new information and that therefore are of special value for substantiating the planning decisions have been proposed and scientifically substantiated.

Without making any claim to completeness, one can mention here at least those which have undergone experimental verification in the analytical computations for the draft versions of plans (in particular, at GVTs [Main Computer Center], USSR Gosplan) and during the preparation by scientific organization (NIEI, attached to USSR Gosplan; TsEMI, USSR Academy of Sciences; IE OPP, Siberian Branch of USSR Academy of Sciences; etc.) of the preplanning materials, namely the indicators of: the intensification of production; the elasticity of output according to resources and the effectiveness of their use, and the influence upon it and the effectiveness of production in scientific-technical progress as a whole; the interbranch relationships, structural shifts in the economy, the interchangeability and reciprocal complementing of resources of different quality; the achievement of a

structurally balanced situation; the proportional and structure rates of growth (development) of the size of the structural shifts; the complete national-economic expenditures for the final output; the interbranch complexes; the interrelations among the production capacities, and others that are obtained on the basis of normative interbranch models; the effectiveness of additional expenditures of resources of productions of output that are computed on the basis of dual evaluations in the optimizing branch models; etc.

The design decisions being made in accordance with the system-wide methodological support of the ASPC must orient the developers of the functional subsystems toward the use of these and other indicators in the substantiation of the planning decisions. At such time, in order to unite into the system all the features that are recommended for use in planning, it is necessary to establish among them logical and formal ties, including those existing between newly introduced ones and the traditional ones.

Very closely related to the problem of the system of planning indicators is the substantiation of norms and standards. In the course of the designing and introduction of ASPC, one has seen, to a considerable degree, the overcoming of the shortcomings of the initial approach to the creation of an automated system of norms (ASN), when the principal attention was devoted to norms of material expenditures and it was presupposed that they are formed by means of their successive aggregation, beginning with the enterprise and ending with USSR Gosplan (although it is obvious that what acts as the weight when aggregating the norms are the volumes of production which, with the aid of these norms, must be substantiated). For the annual planning in the system-wide design decisions and the self-contained methodological support of the subsystem "Norms and Standards" for the ASPC, there has been substantiated an approach to the composition and reciprocally coordinated formation of a complex of in-kind and value norms for all types of production resources [23, 24]. This approach began to be implemented and yielded its first positive results as early as the 10th Five-Year Plan. Taking into consideration the fact that the basic planning decisions with regard to the realization of the long-range structural policy, the directions of scientific-technical progress, and the investment program are made in the five-year plan, the approach being used, from our point of view, is completely satisfactory. Subsequently, with the expansion of the technical capabilities and the improvement of the interaction between the ASPC and the automated control systems of the ministries and departments, it can be developed at the expense of the application of methods of iterative aggregation.

In long-term (five-year and longer-term) planning, the approach that is employed when forming the normative base of computations of the annual plan, obviously, is unacceptable. But it is a matter not only, and not so much as, the number of norms and standards being used in this mode or their degree of detail, as it is a matter of the very principles of their elaboration and application. It is important here to note the two following factors.

There is a widespread opinion that the normative base of the long-range plan can be created prior to the drawing up of the plan itself: first it is necessary to work out the scientific substantiated progressive norms and

standards that take into consideration the technical progress and advanced experience, and then, on their basis, to construct the plan (see, for example, [8]). One can scarcely agree with this. When one speaks about technical standards and parameters to be applied in economic-engineering computations for the plan, the planning decisions actually do not exert any influence upon them and they do not change in the process of working on it. But if one takes the technical-economic standards and norms for the expenditures and the use of resources (materials-intensity, assets-intensity, labor-intensity, etc.) that are required for the substantiation of the needs for resources in the branch subsystems and for the balance-sheet computations in the composite subsystems of the ASPC, they depend in the most immediate manner upon the scientific-technical progress, the planned level of the introduction of its achievements into production, and the decisions dealing with the volume and the branch and intrabranh structure of capital investments. In exactly the same way, for example, the standard for the effectiveness of the capital investments, which is employed, in particular, as the coefficient for reducing in the target functions the optimization tasks to be resolved in the branch subsystems, cannot be substantiated or established until the general-economic proportions for the planning period have been ascertained and the balance sheets for the material, labor, and financial resources have been constructed. Thus, the planning norms and standards must be elaborated not before the drawing up of the plan, but in the process of drawing it up.

Linked with the first factor is the second factor that is being considered. In the mode of five-year planning, and especially planning for longer periods of time, when there is an especially large amount of freedom in varying the resources and choosing the directions of scientific-technical progress, it is absolutely necessary to use norms and standards that are differentiated according to the various existing and newly constructed enterprises, and, for the latter, also according to the various types of enterprises and technological methods. The degree of their differentiation differ depending upon the type of plan and the stage of planning, and upon the level for which those norms and standards are intended.

Various approaches are possible here. [15] contains a substantiation of the necessity for and the conditions of elaborating and applying differentiated norms for the materials-intensity, assets-intensity, and labor-intensity of output at the free national-economic level, and considers the general principles of their determination and the possible ways to realize those principles as applicable to the various branches of industry and the national economy. In the scheme of multilevel optimization, with its experimental verification at USSR Gosplan, four alternatives of the decision of the branch tasks of optimization which have been formulated by a definite method act, as it were, as technological methods in the composite national-economic interbranch model [26]. Obviously, one can also adopt other ideas, but it is indisputable that in the system-wide design decisions and in the self-contained methodological support of the "Norms and Standards" subsystem it is necessary to stipulate and to set down the ways of forming, in interaction with the "Science and Technology" subsystem and with the corresponding units of the branch subsystems of the ASPC, differentiated norms for expenditures and standards for the use of resources.

4. Development of Planning Methods

The design decisions of system-wide methodological support proceeds from the fact that the ASPC must create a base both for the further development of the traditional methods of planning and for the introduction into practice of new methods that correspond to the goals and tasks of improving it. In planning work, not a single one of the methods is used in isolation, and therefore the designing of the ASPC stipulates the expansion of the capabilities of the coordinated use of their entire arsenal.

Among the various directions in the development of the balance-sheet method of planning, the ones that would seem to be the most important ones are the three following, for the realization of which the necessary prerequisites in the ASPC must be prepared. They are, first, the increase in the number of balance-sheet computations for purposes of having them encompass all aspects and stages (from the production of output until its final consumption) of socialist expanded reproduction in the unity of its in-kind and value aspects. At such time we have in mind not the simple increase in the number of balance sheets being developed, but, rather, the need to make their composition conform to the specifics of the current and long-range plans and to the distribution of responsibility for the making of the planning decisions at the various levels of planning. In this instance, for each balance sheet in the self-contained methodological support of the corresponding functional subsystem there can and must be created a scientifically substantiated methodology for its formation.

Secondly, it is the establishment of precise interrelationships among the synthetic, composite, and partial balance sheets that correspond to the logic of planning and to the designed sequence of developing each type of plan at each stage of its substantiation, on the one hand, and the coordination of the balance sheets at one level among themselves, on the other. Obviously, the procedure for coordinating the various balance sheets that has developed in the practical situation under conditions of primarily resource planning -- the procedure of coordinating them by means of so-called variant approximations -- does not provide the required accuracy or time-responsiveness. The ASPC for each mode of planning must have its own system of balance-sheet computations that makes it possible to form purposefully the planned material-substantive, value, and financial proportions and, in a time-responsive manner, to take into consideration the significant consequences of the changes to be made into one balance sheet in the course of developing the plan, which consequences occur for the other balance sheets that are directly or indirectly linked with it.

Thirdly, in the ASPC it is necessary to create consistently the conditions for multivariant computations of individual balance sheets, their groups, and, in the final analysis, their entire system in the particular mode of planning for the purposes of optimizing the planning decisions. Although the necessary prerequisites for realizing the second and third of the directions mentioned are prepared in the individual functional subsystems, the chief problems here can be resolved only in the process of combining the economic-planning tasks

of the various functional subsystems and elaborations of the major inter-subsystem complexes of computations.

Obviously, the higher the degree of the scientific substantiation of the planning balance sheets, the more completely the progressive norms and standards are used when determining their indicators. At the same time, the directions in the use of the normative method when preparing the plans are not exhausted by the creation of the corresponding base of balance-sheet computations. An important role in the substantiation of the planning indicators of the various sections of the plan must be played by the target standards, and the establishment of the planning assignments for the production of output and the limits for resources must be accompanied by the approval of the appropriate economic standards. Mention has already been made above of certain unresolved and, from our point of view, especially important problems of forming the system of norms and standards. We might, however, note here that with all the possible variants of resolving the methodological problems that pertain to the composition and principles of construction of the system of norms and standards, the development of the normative method of planning under the conditions of the ASPC must be based on the development and introduction of a complex of technological means, including the means of mathematical, informational, and technical support, that are necessary for the automated formation, storage, and actualization of the normative data and for organizing effective access to them by the users. The experience of creation such a complex of means exists in the section of the norms for material expenditures for production, capital construction, and repair-and-operational needs as applicable to the mode of annual planning [23, 22].

The realization of the basic directions in improving the planning in the process of designing and introducing the ASPC presupposes the broad use of the target-program method when elaborating all types of plans for the effective resolution of major socioeconomic and scientific-technical problems.

It is also necessary to devote more attention to the development under the conditions of the ASPC of forecast methods, the application of which must guarantee the raising of the level of analytical work at the initial stages of the drawing up of the plans, to the expansion of the scope of information for substantiating and making the planning decisions, and to the creation of the prerequisites for carrying out active monitoring of the rate of fulfillment of the plans.

For completely understandable reasons, a special place in the further development of the methodological support of the ASPC belongs to the methods of economic-mathematical modeling. Some of the problems existing in this area (in particular, problems of building the economic-mathematical models into the real technological scheme of planning, problems of forming them into complexes, etc.) have already been discussed by us on the pages of this journal (see [14])³. The consideration of the composition of the economic-planning tasks that have been practically realized in the ASPC [1, Chapter 20; 2], in combination with an analysis of the design decisions dealing with individual elements of its methodological support, makes it possible to reveal also the no less important problems of developing methods of economic-mathematical modeling in the ASPC.

Obviously, in the current five-year plan and subsequently there will continue to be a buildup of the total number of economic-planning tasks realized in the ASPC. In this process it is necessary to "even out" the distribution of the tasks among the various modes of planning (at the present time approximately 80 percent of the total number of tasks are intended for the preparation of the annual plans) and the substantial improvement of their quality (at the present time approximately 90 percent of them pertain to the class of tasks of the direct processing of data). Hence there evolves the need for the outstripping rates of development and introduction of models for long-term planning. Inasmuch as, precisely here, the need for the use of methods of economic-mathematical modeling for the resolution of the economic-planning tasks stipulated by the planning technology being designed is objectively higher than in current planning, this will also guarantee the improvement of the qualitative composition of their entire totality.

It is easy to foresee that the realization of this approach, which guarantees an increase in the share of the "model" tasks in the process of building up their total quantity, will encounter a number of extremely essential difficulties, the overcoming of which will depend not only upon the correct choice of priorities in developing the ASPC, but also upon the resolution of the problems that go beyond the confines of that system.

A typical example of the difficulties of the second type is the state of affairs with the development and introduction into practice of planning of the branch models for optimization. The high effectiveness of their practical application is a scientifically established, experimentally verified, and widely known fact. However, after the number of tasks of optimization for various branches and types of production entities that were being resolved at GVTs, USSR Gosplan, reached approximately 60 in the mid-1970's, one observed a steady tendency toward the reduction of their quantity. This is explained primarily by the fact that simply on the basis of conclusions following from the results of optimization computations, decisions began to be made about the allocation of resources, and the ministries and departments in one form or another began to limit the submittal to Gosplan of the initial information for the resolution of those tasks. This situation is the consequence of the shortcomings of the economic mechanism, which does not always orient the producer toward the location and the optimal use of the available resources. The situation is typical not only for the ASPR, but also for an OASU [branch automated control system] and an ASUP [automated system for administration of an enterprise], in the makeup of whose tasks the tasks of optimization constitute 3-5 percent [28]. Among the factors that are restraining the dissemination of optimization computations at the level of the branches and enterprises, there has been noted "the lack of perfection of the existing system of economic indicators of the planning and incentives for the production collectives" [28, p 831]. But we consider to be artificial the recommendations expressed in connection with this, which concern the introduction of economic incentives (in the form, for example, of special bonuses) for workers in the industrial associations, ministries, and departments, and in Gosplan, for the development of information for the tasks of optimization and for their practical use. The effective resolution of the

problem being considered can be achieved only together with the improvement of the economic mechanism.

Difficulties of another kind arise when developing the economic-planning tasks that realize the functions that were stipulated by the technological scheme being designed for planning under conditions of ASPC -- the functions involved in substantiating the sections and the indicators of the long-range plans that deal with social development and the standard of living, and with scientific-technical progress. In literature there have been numerous mentions of the fact that there has been insufficient development of the models of social planning and the methods of modeling scientific-technical progress (see, for example, [9]). And that, obviously, had an effect upon the methodological support of the corresponding functional subsystems of the ASPC. For example, in the "Science and Technology" subsystem of the ASPC for USSR Gosplan, until recently, there had been introduced only three complexes of data-processing tasks and in the current five-year plan there is no proposal for any significant increase or any qualitative shifts in the makeup of the tasks in the subsystem. As is noted in [29], the resolution of the methodological questions of planning the development of science and technology within the confines of the ASPC presupposes the establishment of a precise scheme, procedure, and methodology for the long-range planning of scientific-technical progress at all levels -- from USSR Gosplan to the individual territorial-production complexes and enterprises. Pointing out the possibility of employing various approaches and considering one of them that is being developed at IE OPP, Siberian Section of USSR Academy of Sciences, A. G. Aganbegyan remarked that one can propose here also a corresponding model apparatus [29, pp 38-40]. It is also necessary to keep in mind the fact that another problem that is still far from practical resolution is the problem of the endogenous reflection of scientific-technical progress in the economic-mathematical models intended for composite national-economic planning. One of the aspects that is linked with the formation of a variant normative base for the planning computations has been considered above.

In the current five-year plan we shall see the further development of task complexes which substantiate important indicators of the comprehensive section of the current and long-range plans for social development. In the "Labor and Cadres" subsystem, and also in the subsystems for the branches of the nonproduction sphere, a considerable designing backlog and a large amount of practical experience have been accumulated [2]. Definite positive shifts were also noted in the "Level of Living" subsystem, which, by 1985, was supposed to include a number of tasks based on the models being developed at NIEI, attached to USSR Gosplan: models for the efficient consumer budget, for the differentiated balance sheet of the public's monetary income and consumption, etc. However, for many of the important tasks of the subsystems that were mentioned, the methods of economic-mathematical modeling have not yet been proposed, and therefore their realization goes beyond the confines of the second phase of the ASPC. In addition, it is necessary to develop the methods of accounting for and reflecting the social factors in the models of composite national-economic, as well as branch, planning. As a typical example we can point out that in these models, in particular, the labor resources are viewed, as a rule, in the same series as the others, and what is required is only the formal observance of the limitations on the number of

persons employed (the total amount of products of labor-intensities times the volumes of production is less than or equal to the limit for the number of personnel), although it is understandable that interbranch or interregional migration, apart from having a production aspect, also has a clearly expressed social aspect. Evidently, the problems of methodological support that exist in this area can scarcely be resolved in the current five-year plan.

Unlike the possibilities that were stipulated in the "Financial Balance Sheet of the State" and "Production Costs and Profit" subsystems, there is, in principle, the possibility within the near future, if not to realize, then to develop and to verify experimentally the designing decisions that stipulate the use of the methods of economic-mathematical modeling in the resolution of the economic-planning tasks involving the substantiation of the indicators for the corresponding sections of the plan and the formation of the financial proportions and the state of material and financial balancing in the reproduction process. In any instance, the backlog that is necessary for this in the area of the model apparatus exists, and in alternatives that differ according to their complexity and the labor-intensity of realization. Therefore the basic difficulty here, in our opinion, consists in overcoming the inertia of automating chiefly the direct planning computations and in concentrating the efforts on the adapting of the proposed models to the real conditions of developing the plans.

Without continuing the list of specific problems (particularly, of the model support of the development of the comprehensive target programs, the application in the planning computations of the methods of mathematical statistics and the transition to the construction of major complexes of econometric models, etc.), we would like to dwell, if only briefly, on a question which, under present-day conditions, is taking on special immediacy -- the question of the use of simulation modeling. Despite the doubts that are sometimes expressed by certain developers of ASPC, it is precisely these methods, in our opinion, which sooner or later will occupy the predominant place in the methodological support of the economic-planning tasks being resolved with the aid of economic-mathematical models, inasmuch as, to the greatest degree, they conform to the understanding of the ASPC as a man-machine system. The experience of the designing and introduction of the ASPC confirms that the complete cycle of resolving an economic-planning task with the application of economic-mathematical models, in addition to the direct computations based on the model, includes the formation and expert evaluation of the initial information, the analysis of the alternatives for the results of the computations, that is, in an unobvious form presupposes the elaboration by the planning worker-user definite scenarios for the behavior of the object being modeled, the playing through of those scenarios on the model, and the making of decisions on the basis of the intermediate data and the final results of the computations.

It is obvious that this kind of cycle can be realized most effectively when the model of the object being planned is built into a certain simulation system that makes it possible to combine efficiently the formal and heuristic methods of substantiating and making the planning decisions. As for the economic-planning tasks for which no economic-mathematical models that describe in analytical form the object to be designed have been proposed, the

creation of simulation systems with the use of digital modeling of its behavior on the basis of the retrospective analysis of the expert scenarios is, in essence, the only possible means of automating their decision. Of course, what serves as the prerequisite for the construction of even the simplest simulation systems is the outstripping development of the entire complex of the technological support means of the ASPC, and primarily the means that support the interactive mode -- the interaction between the planning worker and the electronic computer.

However, whereas in the resolution of the tasks chiefly of a purely production or economic-production nature it will be necessary for a certain period of time to make do with the approaches that have been accepted and assimilated in the ASPC, for the most general ones it is already critically necessary to use the simulation approach. This, in our opinion, pertains primarily to the tasks of the functional subsystem of the planning of the comprehensive improvement of the economic mechanism. The analysis of the scientific backlog that has been accumulated in this area indicates that, even with today's technical base, simulation modeling makes it possible to obtain extremely meaningful conclusions with regard to certain problems of improving the economic mechanism. On the basis of the experience that has been accumulated in our country and in the other socialist countries, it is possible to substantiate the methodological prerequisites of the simulation modeling of the economic mechanism, to structure it as an object of study, and to form a number of internally coordinated alternatives of the economic mechanism for the purpose of revealing the peculiarities of the functioning and evaluation of the consequences of the realization of each of them.

Taking into consideration the fact that at the present time, as it generally acknowledged, the improvement of the economic mechanism is one of the most important reserves and most powerful levers for accelerating socioeconomic development and the corresponding measures require careful preparation and complete substantiation, the elaboration of the ASPC subsystem that was previously mentioned, as well as the elaboration of the means and methods of simulation modeling in it, is converted into an urgent practical task. In addition to the realization in this subsystem of specifically its functions of preparing the assignments, measures, and the indicators in the section of the plans dealing with the comprehensive improvement of the economic mechanism (by means of studying the reaction of the economic objects to a particular system of approved planning indicators, the evaluation of various combinations of direct planning assignments, economic levers and incentives, etc.)⁴, it is necessary to stipulate in it the resolution of such an important task as the reflection of the effect that the measures to improve the economic mechanism have upon the technical-economic indicators and the parameters being used in the planning computations for other (to a limit, all) the sections of the plans.

FOOTNOTES

1. The difficulties existing here are also linked with the insufficiently consistent realization of the decisions that were made in the draft version of the ASPR design that pertain to the system-wide informational support, particularly with the departure from the initially incorporated

ideas concerning the creation of a base informational language for the economic-planning tasks, with miscalculations in development and maintaining the statewide and system-wide classifiers, etc.

2. The profit that one has in mind is not the balance-sheet profit, but the net profit, that is, the profit that does not take into consideration the payments for attracted resources.
3. Interesting views, but ones which, in our opinion, are not indisputable, concerning these questions are expressed in [27].
4. Unfortunately, today we, as a rule, limit ourselves to stating that a particular measure involved in improving the economic mechanism will contribute to increasing the effectiveness of social production, inasmuch as we are unable to evaluate quantitatively how it exerts an influence upon the change, for example, of the materials-intensity, assets-intensity, and labor-intensity of the output. As a result, frequently in the preplanning documents and planning materials one encounters the situation when, in one section, major measures are proposed for improving the economic mechanism, and in the functional and branch sections, as substantiation for the planning assignments, one cites the dynamics of the technical-economic indicators and parameters, which dynamics continue the previous tendencies that had developed under the influence of those very factors to the elimination of which those measures are aimed.

REFERENCES

1. "Avtomatizirovannaya sistema planovykh raschetov" [Automated System of Planning Computations], Moscow, Ekonomika, 1980.
2. Bezrukov, V. B., "Results and Prospects of the Development of ASPC," EKONOMIKA I MATEMATICHESKIYE METHODS, 1984, Vol XX, No 5.
3. "Planirovaniye narodnogo khozyaystva SSSR" [Planning of the USSR National Economy], Moscow, Ekonomika, 1968.
4. Smekhov, B. M., "Perspektivnoye narodnokhozyaystvennoye planirovaniye (problemy optimizatsii)" [Long-Range National-Economic Planning (Problems of Optimation)], Moscow, Ekonomika, 1968.
5. "Kompleksnoye narodnokhozyaystvennoye planirovaniye" [Comprehensive National-Economic Planning], Moscow, Ekonomika, 1974.
6. Nemchinov, V. S., "Izbrannye proizvedeniya" [Selected Works], Vol 3, 1974.
7. Bachurin, A. V., "Planovo-ekonomicheskkiye metody upravleniya" [Economic-Planning Methods of Administration], Moscow, Ekonomika, 1974.
8. Ivanchenko, V. M., "Metodologiya narodnokhozyaystvennogo planirovaniya (problemy sovershenstvovaniya)" [Methodology of National-Economic Planning (Problems of Improvement)], Moscow, Ekonomika, 1975.

9. Fedorenko. N. P., "Optimizatsiya ekonomiki" [Optimization of the Economy], Moscow, Nauka, 1977.
10. "Matematika i kibernetika v ekonomike" [Mathematics and Cybernetics in Economics], Moscow, Ekonomika, 1975.
11. Mayminas, Ye. Z., "Protsessy planirovaniya v ekonomike. Informatsionnyy aspekt" [Processes of Planning in Economics: Informational Aspect], Moscow, Ekonomika, 1971.
12. Matsnev, D. A., "Methodological Questions of the Development and Functioning of the 'Composite National-Economic Plan' Subsystem of the ASPC," in "Voprosy sozdaniya ASPR" [Questions of the Creation of ASPC], No 6, Moscow, GVTs, USSR Gosplan, 1975.
13. Kuleshov, V. B., "Modelnoye obespecheniye tekhnologii planovykh raschetov" [Model Support of the Technological Scheme for Planning Computations], Novosibirsk, Nauka, 1980.
14. Urinson, Ya. M., Klotsvog, F. N., Matsnev, D. A., "Economic-Mathematical Models in the ASPC and the Problems of Forming Them Into Complexes," EKONOMIKA I MATEMATICHESKIYE METODY, 1982, Vol XVII, No 5.
15. Klotsvog, F. N., Matsnev, D. A., Urinson, Ya. M., "Results and Prospects of the Development and Introduction of TsKZ [central complex of tasks] for the ASPR of USSR Gosplan," EKONOMIKA I MATEMATICHESKIYE METODY, 1984, Vol XX, No 5.
16. Urinson, Ya. M., "Systems Designing and Introduction of the TsKZ of the ASPC of USSR Gosplan," in "Voprosy sozdaniya ASPR," No 57, Moscow, GVTs, USSR Gosplan, 1983.
17. Aronskiy, Yu. A., Yasin, Ye. G., "Questions of the Construction and Application of Informational Models of the Processes of Planning," EKONOMIKA I MATEMATICHESKIYE METODY, 1981, Vol XVII, No 6.
18. "Problemy narodnokhozyaystvennogo planirovaniya" [Problems of National-Economic Planning], Moscow, Ekonomika, 1982.
19. Ivanov, Ye. A., Mayminas, Ye. Z., "Problems of Reserves in Planning," EKONOMIKA I MATEMATICHESKIYE METODY, 1981, Vol XVII, No 3.
20. Smekhov, B. M., "Limits of Accuracy of the National-Economic Optimum," EKONOMIKA I MATEMATICHESKIYE METODY, 1980, Vol XVI, No 3.
21. Kotov, F. I., "Organizatsiya planirovaniya narodnogo khozyaystva SSSR" [Organization of Planning of the USSR National Economy], Moscow, Ekonomika, 1964.
22. Yasin, Ye. G., "Problems of Developing an Information System," EKONOMIKA I MATEMATICHESKIYE METODY, 1977, Vol XIII, No 5.

23. Kushakov, O. K., "The Further Directions of Forming the Normative Base for Planning Computations Under Conditions of the ASPC," *EKONOMIKA I MATEMATICHESKIYE METODY*, 1980, Vol XVI, No 1.
24. Yun, O. M., "Certain Questions Concerning the Improvement of the Balance-Sheet Methods of Planning," *PLANOVOYE KHOZYAYSTVO*, No 11, 1982.
25. Smekhov, B. M., Urinson, Ya. M., "Metody optimizatsii narodnokhozyaystvennogo plana" [Methods of Optimizing the National-Economic Plan," Moscow, *Ekonomika*, 1976.
26. Kosov, V. V., Pugachev, V. F., "Multistage System of Optimizing the Computations of the Long-Term National-Economic Plan," *PLANOVOYE KHOZYAYSTVO*, No 10, 1974.
27. Rayzberg, B. A., Kuranov, G. O., "Problems and Methods of Using Economic-Mathematical Methods in Planning," *PLANOVOYE KHOZYAYSTVO*, No 7, 1983.
28. Kantorovich, L. V., Cheshenko, N. I., Zorin, Yu. M., Shepelev, G. I., "The Use of Optimization Computations in Automated Systems for Controlling the Branches of the National Economy," *EKONOMIKA I MATEMATICHESKIYE METODY*, 1978, Vol XIV, No 5.
29. Aganbegyan, A. G., "Path to Improving the Technological Scheme of Planning," *KOMMUNIST*, No 10, 1981.

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CSO: 1820/258

REGIONAL DEVELOPMENT

AGANBEGYAN INTERVIEWED ON BAM AREA DEVELOPMENT

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 24 Sep 85 p 1

[Interview with Academician A. Aganbegyan, chairman of the USSR Academy of Sciences Scientific Council for BAM problems, by N. Ilinskaya, SOTSIALISTICHESKAYA INDUSTRIYA correspondent, in Irkutsk; date not specified]

[Text] A meeting of the party aktiv in Tyumen and Tomsk oblasts pointed out that the accelerated development of Siberia's and the Far East's production forces is an important component in the party's economic strategy. The USSR Academy of Sciences Scientific Council for BAM [Baykal-Amur Mainline] problems, whose meeting is opening today, will discuss ways to effectively develop the natural resources of the eastern regions from this position. Academician A. Aganbegyan, chairman of the council, talks about the tasks facing scientific and practical workers in a conversation with our special correspondent, N. Ilinskaya:

The opening of through operational movement over the Baykal-Amur Mainline marked the beginning of a new stage -- the active economic development of the territory adjacent to it. It is planned to form 11 territorial production complexes and industrial centers in BAM's area, which is composed of 1.5 million square kilometers. In the future, they will form a new industrial zone for the country. Each of these complexes will specialize considering local resources.

In particular, the deposits of various useful minerals, including oil and gas, which have been discovered in the upper reaches of the Lena and in the Kirengi and Vitima basins, have become the precondition for the formation of the Verkhnelenskiy Territorial Production Complex and the Mamsko-Bodaybinskiy Mining and Industrial Center. Based on them, it is necessary to build a complex of mutually supporting works that will insure the rational use of the natural resources.

It is necessary to point out that the oil and gas reserves, which have been discovered, are related to the Siberian table's Nepsko-Botuobinskiy Dome,

which has good prospects. The oil here is noted for its high quality and high content of light distillates and valuable oils. There is practically no sulphur in it and this raises the value of the deposit considerably. The use of its hydrocarbon raw material will exert an enormous influence on the development of production forces in eastern Siberia, Yakutiya and the country's northeast.

As was pointed out during the meeting of the party and economic aktiv in Tyumen and Tomsk oblasts, one of the most important ways to improve the effectiveness of capital investments in the extractive branches is to shift to the thorough and full-scale processing of the raw material on the spot. In particular, if an oil refinery, capable of using up to three million tons of raw material a year, is constructed in the city of Lensk and oil is sent to it from the Central Botuobinskiy deposit, which is located all told 100 kilometers from it, it will be possible to stop the seasonal delivery of oil products to Yakutiya on the Lena. It would be possible to save approximately 200 million rubles a year by decreasing transportation expenses through this alone. Moreover, considerable oil resources will be freed for use in other rayons of the country.

The council session will also analyze the national economic importance of organizing a gas industry in eastern Siberia. For example, it is advisable to lay a gas pipeline from the Northern Irkutskiy and Western Yakutskiy deposits through Bratsk to Angarsk and Irkutsk. According to our calculations, the arrival of natural gas in Angarsk would permit more than a million tons of oil products and two million tons of coal, which is being used as a chemical raw material, to be released. It is also important to develop a gas chemical industry at the Angarsk Petrochemical complex which is the largest in the country.

[Question] Besides fuel, on the basis of what other resources will the Verkhnelenskiy Territorial Production Complex be developed?

[Answer] A province of high quality potassium salts with an overall estimated supply of 70 billion tons is being opened in the northern part of Irkutsk Oblast. Large deposits are at a depth of only 600-900 meters. It is difficult to overestimate their importance. Agriculture in Siberia and the Far East annually requires approximately two million tons of potassium fertilizer. They now import it from the country's European part in an insufficient amount -- the shipping distance is a limiting factor. The salts of the Nepskiy Basin, which contain few impurities, are a wonderful raw material for the production of potassium fertilizer. In our opinion, it is necessary to accelerate the thorough prospecting of the deposits and the development of justifications for constructing a mining enrichment combine.

The territory, which is adjacent to BAM's western section, is rich in high quality lumber. Many of its massifs were inaccessible until recent times because of the absence of regular transport communications. True, it is necessary to take into account the fact that the forest resources of the Verkhnelenskiy Territorial Production Complex are essentially the last reserves in the Angaro-Yeniseyskiy region, which have not been touched by industrial

exploitation. This means that an especially careful approach to developing the structure of the future forest industry complexes is required. It is necessary to keep in mind that the shift to an active resource conservation policy has primary importance for Siberia where twofold less final product is produced from a cubic meter of prepared wood than for the country as a whole.

Studies, which have been done by the scientific research and design organizations of the USSR Ministry of Timber, Pulp and Paper and Wood Processing Industry, show the advisability of creating large timber industrial complexes in the Ust-Kutskiy, Kirenskiy and Kazachinsko-Lenskiy rayons. It is possible to prepare more than a million cubic meters of especially valuable softwoods a year in each one of them and to process it almost without losses into high quality lumber, cellulose, large-shape plywood, and technological chips.

[Question] What are the primary problems that must be solved in order to accelerate the formation of the Verkhnelenskiy Territorial Production Complex?

[Answer] The complex still has no general contractor. It is also necessary to decide which ministry will assume the construction of the industrial and civilian installations. Considering its territorial proximity to the Bratsko-Ust-Ilimskiy Territorial Production Complex, there is sense in entrusting this task to the Bratskgesstroy of the USSR Ministry of Power and Electrification. This organization has a powerful production base and experience in construction under similar conditions, including the construction of enterprises for the thorough chemical and mechanical processing of wood.

The effective development of the natural resources is linked to a considerable degree with the development of transportation. In our view, it would be advisable to examine the question of constructing a branch railroad line connecting the Verkhnelenskiy Territorial Production Complex deposits with BAM. Crucial tasks face the planners. Today, they must approach the prospects for developing Siberia with one yardstick-- each design must be thoroughly substantiated not only from a production point of view but also from a social one and must provide for the establishment of the appropriate work and living conditions.

The development of the natural resources in the BAM area is a very important landmark in carrying out the party's economic strategy for the preferential development of the production forces in the country's eastern rayons.

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CSO: 1820/18

REGIONAL DEVELOPMENT

GOSPLAN, ACADEMIA WORKING ON FAR EAST DEVELOPMENT PROGRAM

Moscow PRAVDA in Russian 28 Sep 85 p 2

[Article by V. Chichkanov, director of the USSR Academy of Sciences Far Eastern Scientific Center's Economic Studies Institute and USSR Academy of Sciences corresponding member, Khabarovsk: "Experiments for the Region].

[Text] The country's Far East region, including the vast expanses of our northeast, represents more than a quarter of USSR territory. They began to build an economic complex here shortly before the Great Patriotic War. It was developed rather heavily during subsequent years, and the volume of industrial output, which is produced by it, grew fourfold during the last two decades.

The region's economic potential is great and the prospects for using it go beyond the horizon of the 21st century. Figuratively speaking, the search is being conducted in depth and breadth. There is the mineral wealth of the land and sea, and there are the enormous expanses of territories with different climatic zones.

In order to build up the catch of maritime biological resources, it is necessary, for example, to design and build vessels for effective autonomous and expeditionary fishing in the different areas of the world's ocean and special ships for fishing on the shelf area of our seas. The problem of the artificial reproduction of biological resources-- the development of maritime crops -- has also become an urgent one. The coastal waters of the Far East have extremely good prospects in this respect. With the intensive establishment of maritime "farms", their aggregate capacity will permit several thousand tons of scallops, oysters and shrimp and up to half a million tons of products along with sea plants to be obtained annually. However, the construction of specialized floating systems is required.

Another problem is the development of the ocean's mineral resources. Research on the spatial distribution and composition of the iron and manganese concretions and a search for areas, which have prospects for their surveying and mining, are being conducted. The providing for the future ocean mining of the mineral raw materials has placed the scientific study and designing of an economic metallurgical complex to process the concretions on the agenda. It is time to intensify research in this area.

The Far East's dry land has been studied more thoroughly, and its biological resources are being used more fully, forming a base for a timber industry complex and agricultural production. The timber industry complex, however, can be developed only in the region's southern zone because the northern forests are meager and, moreover, have an important environmental protection aspect, protecting salmon spawning areas in particular.

Nature protection laws and the equilibrium of its major components, which has taken shape over centuries, have exceptionally important significance for the Far East landscape which is exceptionally vulnerable. In particular, the timber complex of the Far East needs technical systems and technological processes which have been adapted as much as possible to the natural conditions (more than half of the territory is occupied by mountain forests) and to the natural structure. The accelerated development of chemical and chemical-mechanical processing of lumber with a re-orientation toward technology that permits larch, low quality coniferous raw materials and wastes to be used on a broad basis, is required. The necessity to technically reequip the branch by introducing machines based on pneumatic operation, jaw loaders and mobile assemblies for the production of chips, has matured. It is necessary to accelerate the process of concentrating timber industry production and to create complex enterprises.

It is necessary to think about the rational use of soil resources. The region's scientific establishments are still not sufficiently oriented toward studying their productivity and methods for protecting and maintaining their fertility. This is even more important since the serious research into the thermal and mass transfer soil processes, which has been begun, has shown that they do not have any similarity with those in other areas of the country. The agro-technical methods, which have been developed-- let us say -- for the European part of the USSR or western Siberia, cannot be automatically transferred to the Far East because they do not satisfy local climatic conditions. In particular, the shortage of zonal sorts of cultivated crops testifies to the need to expand agricultural science in the region.

Is it possible to find new fruitful soil and to increase the return from the land that has been developed? Undoubtedly. For example, the purposeful lowering of tundra lakes permits rich soil to be freed for the creation of meadows on their former bottoms. They are sowing them with local types of grass which have been preserved since the bygone ice age. In this way it is possible to introduce significant areas of tundra land into agricultural circulation and to expand meat and dairy animal husbandry instead of reindeer breeding. The work to create artificial meadows has already begun. On the Severnyy Sovkhoz in the vicinity of Anadyr, they are receiving a harvest of greenery, which exceeds the harvest from meadows in the country's central zone, on the bottom of drained lakes.

However, there are also non-biological factors that hinder the development of agricultural production in the region. In a number of Far East northern rayons, stubborn work combined with improved knowledge of climatic conditions

is required. It is possible to satisfy the population's requirements for vegetables and potatoes by local production only under the conditions of economic support for the farms. For example, it is necessary to reward the farmers and to encourage them for using land in the north -- let us say in Magadan and Kamchatka oblasts. Moreover, such a step would provide considerable help to the attachment of the population in the agricultural rayons in the region's south.

In the region's mining industry, scientific and technical policy should be aimed primarily toward the maximum extraction of useful minerals from the depths of the earth and their complete and thorough processing. The importance of this problem is caused by the fact that nonferrous and rare metal ores in the Far East usually have a very complicated mineralogical composition. At times it turns out that the value of the components, which are contained in the "tailings", often exceed the value of the primary ones.

Regional requirements are also taken into consideration when planning the expansion of branches that service industry. For example, it is planned to provide energy support to the economy both through traditional methods and through mobile nuclear plants, tidal and geothermal power stations and wind-driven electrical plants.

The remoteness and almost inaccessibility of the rayons being newly developed create the need to design non-traditional types of transportation for the region: hovercraft, dirigibles and towed balloons and special water transport.

The consistent implementation of the principle: "More equipment and fewer people", is especially important in the Far East. You see, in connection with the intensive development of the economy the region is one of a consistent labor shortage. On the other hand, the providing for the population's vital activity here requires increased capital investments. The population's settling and taking root in these parts occurs much more expensively than in the country's central part-- twofold and even threefold more.

The northern conditions, which are typical of more than 80 percent of the Far East's territory, place special requirements on equipment also. A large part of it should be produced in a "frost-resistant" version and be dependably supplied with spare parts, rubber items and special oils. Such equipment, is, of course, more expensive than standard equipment. The benefits from using it, however, completely compensate for the expenditures.

The designing and use of new types of equipment and technologies in the Far East pose a number of fundamental tasks for engineering science. At the same time, it would be impossible without the incorporation of non-technical innovations, particularly improvements in managing the scientific and technical process and in planning it on a regional level. This still practically boils down to the compiling of the so-called "territorial section" of branch plans for the development and siting of production. Meanwhile, the main task should be to determine what kinds of production should be established here and in what direction it should be expanded on this territory so that society's combined expenditures should be minimal considering the expenditures in other branches and rayons. A branch approach can lead to an increase in social expenditures, generally speaking.

The region's national economy will be successfully expanded only due to the work of scientists and long-range special-purpose programs for the expansion of scientific and technical progress. Quite a bit of scientific potential has been built up: 20 academic establishments, 53 branch scientific research institutions and 27 VUZ. The effectiveness in using these forces depends not only on the scientist and the researchers but also on the mutual interest of economic directors, branch and territory representatives and planning bodies. There are quite a few problem which must be solved in the interested and integrated participation of all parties. The development of the BAM area, for example, has put forward the following: how to combine branch and territorial planning rationally and how to improve the management of territorial production complexes? In this task, we are faced with difficult searches. They are already being conducted.

Along with the USSR Academy of Sciences Economics Institute, USSR Gosplan specialists and a number of other organizations, our institute is now preparing a scientific program for a large-scale regional experiment. It will be aimed at expanding the combining of the branch and territorial approaches when selecting planning and management solutions and at improving the territorial management of scientific and technical progress.

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GENERAL

UZBEK GOSPLAN OFFICIALS DISCUSS ENVIRONMENTAL PROTECTION

Tashkent EKONOMIKA I ZHIZN in Russian No 8, Aug 85 pp 70-72

[Article by K. Alimdzhанov, Chief of the Environmental Protection and Natural Resource Utilization Department, UzSSR Gosplan, and V. Levin, Department Chief Specialist: "One Cannot be Indifferent"]

[Text] Human endeavor cannot be considered outside or apart from nature because at one time it evolved from nature, and today it is possible only because of nature's energy and material resources. It is generally recognized that production is unthinkable without constant repetition and without continuous self-renewal. But it has only been in recent decades that we have come to comprehend seriously the danger of an ecological catastrophe that could confront humankind in the near future, and that a stable, promising production capacity based on the inevitable utilization of natural energy and resources requires an equal degree of the latter's reproduction.

Environmental protection in the UzSSR, as in the entire country, is a most important governmental task. The Republic Council for Environmental Protection and the Rational Utilization of Natural Resources of Uzbekistan, in operation since 1982, is charged with coordinating these activities in all ministries, departments, and public organizations.

A comprehensive program for standardizing environmental protection has been prepared.

The state environmental control and supervision service has significantly strengthened, expanded, and activated its operations. Special subdivisions have been organized in ministries, departments, associations, and major industrial enterprises.

Capital investment outlays are increasing each year for the implementation of nature conservation measures. Whereas 362.4 million rubles were spent in the Tenth Five-Year Plan, 376.3 million are slated to be allocated for these purposes in the current Five-Year Plan. In addition, significant appropriations are being made by enterprises from their own funds which is indicative of the growing responsibility of individual production subdivisions for the ecologic consequences of their own operations.

All of this is facilitating an improvement in the general ecologic situation. But nature conservation problems are not those that can be resolved at one time, once and for all. These problems require constant work whose scope and growth rate must always correspond to the scope and growth rate of industrial and agricultural production.

In the present article we shall only touch upon two aspects of this multi-faceted problem. We shall discuss the ways in which nature conservation measures are being undertaken in the republic in order to protect the atmosphere and water basins.

The problem of maintaining clean air in our republic is a particularly acute one because Uzbekistan has a rather high natural weather potential of atmospheric pollution.

In the past four years of the current Five-Year Plan over 2,000 measures have been undertaken to reduce the level of air pollution, at a total cost of more than 30 million rubles. More than 200 dust and gas removal plants have been put into operation and almost 500 such facilities have been rebuilt. Almost 900 enterprises of the republic now have as fixed capital equipment for the removal, decontamination, and utilization of industrial atmospheric waste products. Motor vehicle exhaust fumes constitute a serious source of air pollution in the cities. To cope with this problem, regulatory-control stations to determine the toxicity of exhaust gases have been organized at 83 of the biggest vehicle enterprises, and 106 special sites have been built for the repair and servicing of vehicle fuel equipment.

We know that a large part of exhaust fumes is formed at intersections and traffic signals, i.e. in places of traffic congestion where engines are either idling or when gears are shifted at maximum rpm's. Tashkent is successfully using the first priority "ASU-D Gorod-M" [Automatic City Vehicle Traffic Control System] system which is facilitating optimal vehicle traffic flow and preventing the formation of traffic "bottlenecks." Automatic traffic control systems are also in operation in Samarkand, Chirchik, Nukus, and such systems are being introduced in Andizhan, Angren, and Almalyk.

Maximum permissible levels (MPL) of atmospheric pollutants have been worked out in nine cities of the republic for more than 200 enterprises. A MPL planning chart for all the enterprises of Uzbekistan has been approved.

Nevertheless, clean air levels over our cities and industrial areas still do not satisfy the stipulated requirements.

There are still quite a few enterprises where the planning assignments for the assimilation of capital investments and start-up of dust and gas-removal devices are not being fulfilled, where existing equipment is not operating satisfactorily, where technological procedure standards are being violated, and where low-waste or no-waste technology is not being

implemented. The construction of equipment for the removal of smokestack waste gases at the Navoiyazot Production Association has been disrupted, cooling devices for waste gas at the Azot Production Association in Fergan have not been built, and work on the construction of an ammonia and fluorine neutralization site at the Kokand Superphosphate Plant has not yet begun. Repairs of manufacturing equipment at the Elektrokhimprom Production Association in Chirchik are proceeding at an extremely slow and ineffective pace. The construction here of a new nitric acid plant which could sharply reduce air pollution, is proceeding at a slow pace.

In regard to motor vehicles, up to the present time they account for approximately 64 percent, and in some cities, up to 80 percent, of all air pollutants.

In 1984, operation "Clean Air" was carried out by the State Inspectorate for Air Protection, together with the State Motor Vehicle Inspectorate of the UzSSR MVD in Tashkent, Bukhara, Samarkand, and Navoi. As a result of that inspection 1,200 vehicles were removed from service because of excessive carbon monoxide in the exhaust gas.

Agricultural production in Uzbekistan is possible only in irrigated lands. Therefore, the conservation of water resources and their qualitative composition and rational utilization is becoming an increasingly important problem for the national economy.

During the 11th Five-Year Plan capital investments for water resource conservation measures amounted to 171.7 million rubles.

The more efficient use of water and the construction of a recycling water supply system have resulted in a 45-percent saving of fresh water in industry. The amount of standardized purified sewage increased by 100 million cubic meters over the last four years.

Purification facilities at many enterprises are not operating with sufficient effectiveness. Among such enterprises are the aforementioned Elektrokhimprom Production Association as well as the Uzbek High-Temperature and Refractory Metals Combine.

Careless attitudes towards water resource conservation often lead to quite serious consequences. Thus, as a result of dumping sewage from the Yangiyul Biochemical Plant into the Salar canal, the canal water is no longer suitable for either industrial nor agricultural needs. The same fate threatens Zarafshan which is below the Navoiyazot Production Association, and the tributaries of the Syrdari and other small rivers to which sewage is generously "bestowed" by the Yangiyul Biochemical and Andizhan Hydrolysis plants as well as the Furan Compounds Plant in Fergan.

One cannot help but be alarmed by the fact that construction of water protection facilities is falling off from one year to the next. For the period now elapsed of the 11th Five-Year Plan, a total of only 45.1 percent of the appropriated funds for the construction of water treatment plants has been used up by enterprises of the Glavsredazirsovstroy [expansion unknown]. This figure comes to 64.1 percent for the UzSSR Ministry of the Food Industry, 64.6 percent for the UzSSR Ministry of the Meat and Dairy Industry, 36.5 percent for the Uzbek Ministry of the Fruit and Vegetable Industry, and a little more than 30 percent for the enterprises of the Ministry of the Electrical Equipment Industry. Let us cite a few more figures. The completion level of plans to start the operations of water treatment plants is 4.5 percent for the Ministry of the Chemical Industry, 28.3 percent for the Ministry of the Gas Industry, and 20.3 percent for the USSR Ministry of the Petrochemical Industry. The start-up of corresponding plants has not at all been assured by the Main Administration of the Microbiology Industry, the USSR Ministry of the Pulp and Paper, and Wood Processing Industry, the Ministry of Railways, and the USSR Ministry of the Coal Industry. We must say frankly that the directors of these union ministries and departments are not providing the essential capital investments and material-technical resources for the construction of nature conservation installations. Such sites are regarded as objects of secondary importance by these directors who still see the scheduled start of production buildings as their primary task.

Let us dwell in a little more detail on a situation that has evolved at several republic enterprises. The UzSSR State Committee for Water Resources Construction has been building water treatment plants at the sovkhoz imeni Gorkiy of the Balykchinskiy Rayon since 1979, and since 1980 at the Moskva sovkhoz in Andizhanskiy Rayon. The list of such installations of the Uzbek Ministry of Agriculture could be extended.

The water treatment plants of the Glavsredazirsovstroy industrial base in Kungrad have been under construction now for 12 years. The industrial sewage treatment plant with a daily capacity of 7.2 thousand cubic meters at the Syrdari GRES whose construction was begun by the Uzbek Hydroelectric Power Plant Construction Administration in 1975, has not yet been put into operation.

The construction of the Chirchik inter-rayon sewage collector is of great ecologic importance. But the construction of that facility has dragged on for many years, for which the UzSSR Ministry of Construction and the Ministry of Housing and Municipal Services must bear the blame.

The channeling and purification of sewage from the Tashkent Paper and Pulp Factory has been under discussion for 20 years. Although the plans for this work have long since been prepared (which, incidentally, are already becoming obsolete), the UzSSR Ministry of Construction, on various pretexts, has not included this project into the contractual work plan.

The basic reason for these kinds of occurrences is apparently the fact that the construction of treatment plants are regarded as "unprofitable" or works of "secondary importance." In spite of the fact that the existing situation demands that the construction of treatment plants precede the construction of technological complexes, the construction of treatment plants is frequently given the lowest priority, and they are built hastily with many deficiencies.

Consequently, the plants do not accomplish their purpose, remain idle, and the millions of rubles that have been spent on them simply remain "buried in the ground." Suffice to say that at enterprises of the UzSSR Ministry of Agriculture alone there are 16 idle treatment plants at an estimated cost of 3.3 million rubles.

Very frequently, even treatment plants that were built strictly according to plan subsequently function inefficiently because of the non-observance of an operating production cycle and the lack of qualified maintenance service. Such is the state of affairs at the Yangiyul Biochemical Plant, the Elektrokhimprom production association in Chirchik, the Sredazkabel and Tashselmashe production associations, the Altyaryk Petroleum Refinery, and the Uzbek Metallurgical Plant in Bekabad.

In view of the difficulty involved in the construction of treatment plants, we believe it would be advisable to create a specialized construction organization in the republic within the structure of the UzSSR Ministry of Construction that would be engaged solely in the construction of environmental protection facilities.

Environmental protection and improvement are today becoming problems of first priority significance, and no one has the right to be indifferent to them. Therefore, the directors of ministries, departments, and individual enterprises must do everything that is possible to correct this situation in this final year of the 11th Five-Year Plan.

It would be particularly desirable to say something about the fact that there are nine ministries and departments in the republic that are currently engaged in the control of environmental protection at the same time. The division of control functions among so many organs often leads to parallelism and duplication of efforts. But the most important and negative aspect of that situation is the fact that some of those ministries and departments are simultaneously engaged in both the exploitation of natural resources and the control over their proper exploitation. This inevitably gives rise to subjectivism in the resolution of a number of problems.

For example, within the structure of the UzSSR Ministry of Water Resources is the Main Administration for Water Resources which is charged with state control over the utilization and conservation of the entire republic's water resources. It is clear that that this Administration can not objectively control the UzSSR Ministry of Water Resources to which it is subordinate. In this connection, the time has come to create a unified extra-departmental control organ for all areas of nature conservation and the rational utilization of natural resources.

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